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Prison Tattoos as a Reflection of the Criminal Lifestyle Alicia T. Rozycki Lozano Robert D. Morgan Danielle D. Murray Femina Varghese*International Journal of Offender Therapy and Comparative Criminology* vol. 55 (4) (2011) pp. 509–529Published by SAGE Publications, Inc. Reprinted with permission.

The purpose of this study was to examine the relationship between prison tattoos and the criminal lifestyle and recidivism. Participants consisted of 81 male inmates with prison tattoos (i.e., prison-themed or prison-made tattoos), 75 inmates with nonprison tattoos (e.g., animal tattoos, tattoos of ethnic origin), 52 male inmates with no tattoos, and 66 college students with tattoos. Results indicated that inmates with prison tattoos differed from inmates with nonprison tattoos, inmates without tattoos, and college students with tattoos with regard to criminal thinking styles, were at increased risk of recidivism, and presented more institutional behavioral problems, resulting in more disciplinary infractions. There were no significant differences between inmate groups with regard to number of convictions; however, additional group comparisons indicated that inmates with visible tattoos and antisocial-themed tattoos were at greater risk for recidivism and received more disciplinary infractions than inmates without visible or antisocial-themed tattoos. Implications of these findings are discussed.

The process of tattooing is a worldwide phenomenon that has been practiced for thousands of years (Butler, Trice, & Calhoun, 1963; Koch, Roberts, Cannon, Armstrong, & Owen, 2005; Post, 1968; Sanders, 1989) across cultures and social classes (Levy, Sewell, & Goldstein, 1979; Steward, 1990). Findings indicated that 3% to 24% of the general public in the United States have tattoos (Anderson, 1992; Armstrong, Owen, Roberts, & Koch, 2002a, 2002b; Frederick & Bradley, 2000; Laumann & Derick, 2006), whereas the prevalence of tattoos in the prison population is projected to be higher, ranging from 15% to 32% (Manuel & Retzlaff, 2002; Palermo, 2004).

Both people in the general public and prisons alike choose to obtain tattoos for various reasons. Images can be chosen idiosyncratically based on personal reasons or tattoos can be making a statement of identity that can be directed to others, to oneself, or both (Newman, 1982). It is possible that tattoos can serve to define each inmate's psyche and identity (DeMello, 1993). Solidifying one's identity is particularly crucial in prisons where individual identity is limited for inmates (DeMello, 1993). However, the identity that is often solidified is one of being a convict (DeMello, 1993). Should the individual decide to move away from the criminal lifestyle at a later time, the individual may wish to have tattoos removed (Bazan, Harris, & Lorentzen, 2002; DeMello, 1993). This is especially pertinent among inmates as they may select images **[p. v4-234 ↓]** or locations on the body that identify them as criminals. For instance, images may reflect prison life, such as clock faces, spider webs, or prison bars (Baden & Roach, 2001; Buentello, 1992; Taylor, 1970) or suggest greater commitment to criminal gang life when individuals acquired tattoos on the face, head, neck, or hands (Etter, 1999; Phelan & Hunt, 1998). In addition, visible tattoos on inmates have even been linked to thought disorders, self-harming behavior, and a history of violent behavior, substance abuse, psychological treatment, and childhood problems (Birmingham, Mason, & Grubin, 1996; Harry, 1987). In general, various studies link tattoos with deviance, personality disorders, substance abuse, risk-taking behavior, and criminality (Armstrong, 1991; Braithwaite, Robillar, Woodring, Stephens, & Arriola, 2001; Drews, Allison, & Probst, 2000; Manuel & Retzlaff, 2002; Raspa & Cusak, 1990).

Tattooing behavior of criminals has been associated with the theory of the criminal lifestyle (Walters, 1990). The criminal lifestyle theory postulated that deviance is characterized by four behaviors: irresponsibility, self-indulgence, interpersonal intrusiveness, and social rule breaking (Walters, 1990). There are also four validation

processes: anger/rebellion, power/control, excitement/pleasure, and greed/laziness. These processes drive behavior and can explain the motives behind criminal acts (e.g., greed, power) in addition to explaining the obvious reasons for committing an act (e.g., need for money). Perhaps the main thrust of the theory is criminal thinking styles. The idea is that career criminals have flawed ways of thinking and perceiving, which contribute to poor decision making and generally lead to illicit behaviors. The eight criminal thinking styles include mollification (blaming society for problems), cutoff (impulsive justifications for bad behaviors), entitlement (believing oneself to be so special and different from others that societal rules do not apply), power orientation (judging if others are easy targets for manipulation), sentimentality (doing good deeds to prove to themselves that they are not entirely bad people), superoptimism (thinking the odds of getting caught doing bad deeds will be in their favor), cognitive indolence (laziness), and discontinuity, or a disconnect between thoughts and behaviors that allows criminals to compartmentalize their bad behaviors and still view themselves as good (Walters, 1990).

Underlying the concept of the criminal lifestyle (Walters, 1990) is the concept of a criminal personality that is coupled with criminal thinking errors, which then drive behavior. Rationalizations and thinking distortions serve the purpose of reducing guilt and allowing criminals to see themselves as good people despite this “bad” behavior (Walters, 1990). The concept of a “career criminal” stems from empirical research showing that the majority of crimes are committed by a minority of criminals, regardless of socioeconomic status, ethnicity or race, country, age, and gender (Walters, 1990) – thus there is a need to identify offenders who potentially identify with the criminal lifestyle and who are possibly at increased risk for recidivism.

A study from the late 1960s indicated there is a greater percentage of repeat offenders who have tattoos as compared to those in the general public, **[p. v4-235 ↓]** although the type of tattoos was unspecified (Post, 1968). This idea that career criminals may be tattooed was more recently discussed by Walters (1990); a link between one of the four key behaviors in the criminal lifestyle theory, self-indulgence, and tattooing was noted. Self-indulgence includes ignoring consequences and also includes obtaining gratification through attention. For example, criminals may enjoy receiving the attention from others through showy physical appearances. Thus, tattoos are a way to obtain attention. Furthermore, there can be a sense of control over the environment by

attracting attention to oneself by altering physical appearance. Ultimately tattoos are not, in and of themselves, criminogenic; however, some literature indicates correlations between tattoos and delinquency, adult criminality, assaultive felony, and self-indulgence (Walters, 1990).

In addition, self-indulgence revolves around obtaining immediate pleasure and postponing pain (Walters, 1990). Considering Walters's (1990) theory more broadly, the lifestyle criminal is someone who has chosen criminality as a profession. Thus, when an individual tattoos images related to his profession permanently on his body, it seems to indicate a deep commitment to that way of life, and perhaps indicates little hope for alternate lifestyles.

Although a number of studies have examined the relation between tattooing behavior and inmates, the relationship between prison tattoos, the criminal lifestyle, and recidivism has yet to be explored. The purpose in conducting this study is to better understand tattooing behavior among inmates. The tattoo literature indicates that society influences tattooing behavior and people's perceptions of tattoos. There is a difference in image and style when comparing prison tattoos to nonprison tattoos (Baden & Roach, 2001; Jankowski, 2004). There is also a difference between the thinking styles and behaviors when comparing inmates to people in the general public, that is, non-criminals (Walters, 1990). It may be prison tattoos are a manifestation of this difference, and obtaining prison tattoos is one way for inmates to identify with the criminal lifestyle and criminal culture.

Specifically, this study sought to explore whether inmates with prison tattoos endorse a criminal lifestyle, as measured by elevated scales on the Psychological Inventory of Criminal Thinking Styles, Version 4.0 (PICTS), and have higher risk of recidivism, as measured by the Self-Appraisal Questionnaire (SAQ), as compared to inmates with nonprison tattoos, inmates with no tattoos, and college students with tattoos.[1] In addition, whether inmates with prison tattoos have a greater number of convictions and greater institutional behavior problems (i.e., self-reported total number of disciplinary infractions) than inmates with nonprison tattoos and inmates with no tattoos was explored. Also, inmates with greater skin surface covered with tattoos were compared to inmates with less skin surface covered with regard to commitment to the criminal

lifestyle, risk for recidivism, and institutional behavior problems (i.e., self-reported total number of disciplinary infractions). Similar comparisons were made between inmates with visible tattoos (i.e., tattoos on **[p. v4-236 ↓]** the head, face neck, and hands) and inmates without visible tattoos as well as inmates with antisocial-themed tattoos and inmates without antisocial-themed tattoos.

Method

Participants

Participants in this study consisted of 274 adult male inmates and college students, with inmates comprising 208 of the participants and college students comprising 66 of the participants. The average age for the entire sample was 30.1 years (*SD* = 11.3), with a range from 18 to 71 years. Racial and ethnic identity was examined for the entire sample and yielded the following results: 36.2% (*n* = 98) were Caucasian; 30.3% (*n* = 82) were Hispanic/Latino; 23.2% (*n* = 63) were African American/Black; 5.5% (*n* = 15) were Biracial; 2.2% (*n* = 6) were American Indian/Native American; 1.5% (*n* = 4) were Asian/Asian American; and 1.1% (*n* = 3) identified themselves as “Other.” Regarding relationship status, 60.5% (*n* = 164) were single; 12.9% (*n* = 35) were divorced; 11.4% (*n* = 31) were partnered (currently in a relationship); 10.3% (*n* = 28) were married; 2.2% (*n* = 6) were separated; 1.8% (*n* = 5) were common law married; and 0.7% (*n* = 2) were widowed. The average number of years of education for the entire sample was 11.7 years (*SD* = 2.3), with a range from 2 to 18 years of education. Examination of educational history indicated 43.2% (*n* = 116) earned a high school diploma; 29.4% (*n* = 79) of the sample earned a General Equivalency Diploma (GED); 17.5% (*n* = 47) had no diploma; 7.0% (*n* = 19) earned an associate's degree; 1.8% (*n* = 5) earned a bachelor's degree; and 0.7% (*n* = 2) earned a graduate degree.[2]

Inmates with prison tattoos included inmates who had tattoos with prison images (e.g., clock faces, gang symbols, prison bars) as per self-report (participants were asked if they had tattoos related to prison life and to explain how the image was related to prison life), or tattoos made in prison regardless of the content. Nonprison tattoos were

defined as tattoos that individuals in the general public, that is, nonprison population, might acquire; examples include tattoos depicting national origin, love, and animals. The college student sample, which served as a comparison group, consisted of college students with tattoos. This sample included students of various academic levels (i.e., first year through senior year). This sample served as a baseline comparison group for the prison samples.

Materials

A demographic form was utilized in this study. This form requested participants to provide basic information, including age, race and ethnicity, relationship status, highest educational level attained, custody level, crimes committed **[p. v4-237 ↓]** on current incarceration, length of current prison sentence, time served on current prison sentence, and number of disciplinary infractions during their current incarceration.

A tattoo history questionnaire was developed and requested information about the participant's most significant tattoo and information about additional tattoos when applicable. More specifically, participants were asked about their tattoos, including total number of tattoos; age acquired; location on body (hand, arm, wrist, hip, leg, ankle, foot, chest, stomach, neck, back, shoulder, buttocks, genitals, face, head, eyebrow, eyelid, other); the image; if the image was related to prison life and if so, how; the size of the tattoo; setting where acquired; circumstances (alone or with others, sober or intoxicated, professional or nonprofessional); reasons for acquiring the tattoo; the significance of the tattoo; and the time frame during which the first tattoo was considered (whether to acquire a tattoo and what type of design) before acquiring it. Furthermore, participants were asked if they wanted any of their tattoos removed, and if so, why. They were asked to describe how they felt about their tattoos and if they planned to obtain more tattoos.

The PICTS (Walters, 1995, 2006) was designed to assess the cognitions that contribute to a criminal lifestyle. The PICTS is an 80-item, self-report instrument with a 4-point response scale (where 1 = *disagree*, 2 = *uncertain*, 3 = *agree*, and 4 = *strongly agree*) that assesses eight thinking styles: mollification, cutoff, entitlement, power orientation, sentimentality, superoptimism, cognitive indolence, and discontinuity (Walters, 1995,

2006). Internal consistency reliability coefficients for the PICTS scales ranged from moderate to high: .55 to .88 for male offenders (Walters, 2006), and with the mean interitem correlations ranged between .13 and .39 (Walters, 2006). Internal consistency was measured for this study, and the Cronbach's alpha coefficients ranged from .69 to .88. Test–retest stability was also sound as analyses indicated moderately high (ranging from .73 to .85) test–retest stability after 2 weeks (with the exception of the Df-r scale) and moderate (ranging from .47 to .77) test–retest stability after 12 weeks (Walters, 2006). In terms of validity, the PICTS scales were found to correlate modestly to moderately with other measures of criminality, such as the number of prior arrests, the number of prior commitments, the age at first arrest, the age at first commitment, the Hare Psychopathy Checklist–Revised, and the Lifestyle Criminality Screening Form (see Walters, 2006, for a review).

Recidivism risk was predicted by the SAQ (Loza, 2005). The SAQ is a 72-item, true/false, self-report questionnaire that assesses criminal tendencies, antisocial personality problems, conduct problems, criminal history, alcohol and drug abuse, antisocial associates, and anger (Loza, 2005; Loza, Conley, & Warren, 2004; Mills, Loza, & Kroner, 2003). Reliability was assessed by examining internal consistency and test–retest reliability. Acceptable internal consistency reliability was demonstrated with alphas ranging from .69 to .77 (Loza et al., 2004). Internal consistency was measured for this study, and the Cronbach's alpha coefficients ranged from .36 to .84. Strong test–retest **[p. v4-238 ↓]** reliability was demonstrated after 1 week with a reliability coefficient for the total scale of .95 (Loza, Dhaliwal, Kroner, & Loza-Fanous, 2000). Concurrent validity was examined, and offenders with high scores on the SAQ had a higher frequency of past criminal behavior and institutional infractions and a more violent history than those with low scores (Loza et al., 2004).

Procedure

The inmate sample was obtained from general population correctional facilities housing male inmates within the Texas Department of Criminal Justice (TDCJ). The college student sample was obtained from the General Psychology research participant pool of Texas Tech University. Only males were recruited for the student group to facilitate

comparisons with the inmate groups. The response rate for inmates was 57%, and the rate for the college students was 100%.

Depending on warden preferences at each institution, either posted fliers requesting inmate volunteers or a priori random selection by TDCJ staff was utilized. Thus, recruitment did not include a random assignment procedure. Students were recruited from the General Psychology course (for which there is a research requirement) at Texas Tech University. Students met the same selection criteria as inmate participants (i.e., minimum of 18 years of age; ability to read and write in English), with the exception that they were not required to have been convicted of a felony and only students with tattoos were included in this study whereas inmates both with and without tattoos were included.

All participants were tested in a group format. Testing materials were organized using manila envelopes so that each envelope contained an informed consent form, a demographic form, a tattoo history questionnaire, the PICTS and PICTS answer sheet, and the SAQ. The envelopes were distributed to participants during the data collection sessions.

The principal investigator and research assistants used a structured script for all data collection sessions. A brief overview of the forms to be completed (the demographic form, the tattoo history questionnaire, the PICTS, and the SAQ) was provided. Instructions for the PICTS and the SAQ were reviewed. Participants were then asked to complete the forms and encouraged to ask questions that arose while completing the forms. On completion of all forms, participants returned the survey packets to investigators, were thanked for their time, and dismissed.

Prison records were examined to obtain inmates' index offense, number of times in prison, and institutional behavior (e.g., disciplinary infractions, security level). Records were obtained from the inmates' travel cards, which are temporary files maintained by the TDCJ. Staff members noted that in some instances travel cards were unavailable because a particular inmate was in **[p. v4-239 ↓]** transition, while being relocated from one institution to another. Also, staff noted that some travel cards lacked information about the inmates' criminal history and/or institutional behavior.

Data Preparation

Prior to conducting data analyses, data were first assessed for data entry errors. Double data entry was used to eliminate data entry errors. Data were then examined for erroneous data and corrections made. For example, responses where both *true* and *false* were endorsed were treated as missing data. Next, data were examined for missing data, resulting in the removal of 2 SAQ questionnaires (1 college student and 1 inmate) and 14 PICTS questionnaires (8 college students and 6 inmates) as a result of excessive missing data. Guidelines from the SAQ Technical Manual (Loza, 2005) specify that if there are more than three items missing from any one subscale, that subscale may be invalid. Furthermore, four or more missing items on the entire SAQ may negatively impact the affected subscales; however, the remainder of the questionnaire may be interpretable. Following these guidelines, 2 SAQ questionnaires were excluded completely (1 college student and 1 inmate) because of excessive missing data. Guidelines from the PICTS manual (Walters, 2006) specify that greater than five omitted responses on the entire questionnaire makes the questionnaire invalid because many of the subscales are composed of a limited number of items. Following this rule, eight college students and six inmate PICTS questionnaires were omitted from further analyses.

The final data preparation step included examining the PICTS and SAQ for validity according to the steps outlined by the assessment manuals. No data were changed or omitted from the SAQ. Using PICTS cutoffs of a *t* score of greater than 70 on the Confusion–revised scale (Cf-r) and a *t* score greater than 65 on the Defensiveness scale (Df-r), 37 PICTS profiles were omitted from further analyses. In scoring data for the PICTS, missing data were prorated, as suggested in the scoring manual (Walters, 2006).

To address research questions regarding differences between inmates with more or less skin surface covered, inmates were split into two groups based on how much skin surface was covered with tattoos. Inmates self-reported percentage of skin surface covered with tattoos, and a median split procedure was performed to develop approximately equivalent groups (less skin surface covered, $n = 62$; more skin surface covered, $n = 67$).

To address comparisons related to visible or nonvisible tattoos, inmates were collapsed into two groups based on their responses to questions about the visibility of their tattoos. Inmates who reported the presence of a tattoo on their hands, neck, head, or face were included in the visible tattoo group (*n* = 83). All other inmates were included in the nonvisible tattoo group (*n* = 125).

[p. v4-240 ↓]

Lastly, to address comparisons about antisocial verses non-antisocial tattoo content, inmates were collapsed into two groups: antisocial (*n* = 89) and non-antisocial-themed tattoos (*n* = 119). Three trained research assistants examined all tattoos reported by all participants and independently rated each tattoo as antisocial or non-antisocial (as noted, antisocial-themed tattoos were defined as tattoo images or themes that conveyed hostile messages against individuals, groups within society, or society in general; depicted aggressive, vulgar, morbid, or demonic images; indicated dire circumstances [e.g., images related to addiction]; or depicted images or themes of violations of societal rules). A two-thirds majority agreement classification scheme was used, such that tattoos were classified as either antisocial or non-antisocial if two (or all three) research assistants rated a particular tattoo similarly. A minimum of one antisocial-themed tattoo was needed for inclusion in the antisocial tattoo group.

Results

Demographic Equivalence of the Groups

Statistical analyses were conducted on demographic variables to assess the equivalence of the three inmate groups. Given expected sample differences between the college student sample and the inmate sample in this study, the college student group was excluded from the between-groups comparisons for demographic equivalence. Inmate participants in the three tattoo groups (i.e., prison tattoos, nonprison tattoos, and no tattoos) differed with regard to age, racial and ethnic identity, years of education, highest degree obtained, and time served, but not for relationship status or length of prison sentence. Inmates with greater or lesser skin surface covered

by tattoos were not statistically different with regard to age, racial and ethnic makeup, relationship status, highest degree earned, years of education, length of current prison sentence, and time served on current sentence. Inmates with visible or nonvisible tattoos differed with regard to age, racial and ethnic identity, years of education, length of prison sentence, highest degree obtained, and time served but not for relationship status. Finally, inmates with antisocial versus non-antisocial tattoos differed with regard to age, years of education, but not for length of prison sentence, time served on the current sentence, relationship status, racial and identity makeup, or highest educational degree earned.

After evaluating all sets of groups with all demographic variables of interest, six of the seven demographic variables were found to be statistically different between the various inmate groupings: age, race and ethnic identity, years of formal education, highest diploma acquired, length of prison sentence, and time served on current sentence. These six demographic variables were correlated with the 18 dependent variables consisting of 15 PICTS scales, **[p. v4-241 ↓]** the SAQ Total Scale, number of convictions, and total number of disciplinary infractions (see Table 1). Based on correlations of these variables with the dependent variables, as well as theoretical considerations, age and time served on current sentence were held as covariates for most of the data analyses, as indicated below.

Statistical Preparation

Normality was examined by visually scanning histograms for resemblance to a normal curve. Dependent variables were examined for the four groups (i.e., inmates with prison tattoos, inmates with nonprison tattoos, inmates with no tattoos, and college students with tattoos) as well as the three additional sets of groups (i.e., visible/nonvisible tattoos, greater/lesser skin surface covered, antisocial/non-antisocial groups). Generally, the distributions resembled a normal curve except in cases where the distributions were positively skewed; however, where skewness was observed, the skewness was interpreted as appropriate for the respective variables. For example, skewness for a PICTS subscale indicated that inmates had lower *t* scores on that particular subscale and were therefore less pathological on that particular measure of criminal thinking. In addition, skewness and kurtosis values were examined for the four groups

on the dependent variables. Values were also scanned for extreme scores; extreme values were absent in the majority of cases. Some extreme values were noted for the nonprison tattoo group with regard to total number of convictions and for the no tattoo group with regard to the PICTS Mollification and Interpersonal Hostility subscales. These values were not deleted; however, these values were noted for consideration when interpreting the results of the analyses. The assumption of normality is expected to be of minimal concern given sample sizes are sufficient to protect against problems with normality (Tabachnick & Fidell, 2007).

In addition, data were analyzed for possible violations of *t* test, ANOVA, and multivariate analysis of variance (MANOVA) assumptions. First, data were assessed for any possible outliers by utilizing stem and leaf plots and comparing means to 5% trimmed means (Pallant, 2005). Stem and leaf plots provided a means by which to visually scan for potential outliers, which were generally minimal in number if present. The means and 5% trimmed means for dependent variables by the four main groups were scanned, and results generally indicated little difference between these mean scores (from a fraction to three or four points), which indicated that removing the most extreme 5% of scores (both low and high scores) would do little to impact the mean for that variable (Pallant, 2005). Thus, in these cases, removing outliers would do little to affect analyses (Pallant, 2005). However, one PICTS subscale, Interpersonal Hostility, had a modest difference between the mean and 5% trimmed mean for the three inmate groups (6 to 7 points difference), and therefore, this supplemental scale was interpreted with caution.

[p. v4-242 ↓]

Table 1: Correlations between race, age, years of education, time served, length of sentence, and level of education and all dependent variables

Dependent variable	Race	Age	Years of education	Time served	Length of sentence	Level of education
Total convictions						
Pearson correlation	.024	.012	−.235**	.043	.002	−.235**
p (two-tailed)	.735	.871	.002	.556	.978	.002
Disciplinary infractions						
Pearson correlation	−.029	−.138	−.183	.210**	.082	−.094
p (two-tailed)	.696	.079	.121	.005	.279	.260
SAQ total						
Pearson correlation	.079	−.390**	−.291**	−.113	−.149*	.291**
p (two-tailed)	.267	.000	.000	.129	.044	.000
PICTS *t* scores						
Current						
Pearson correlation	−.090	−.193**	−.104	−.156*	−.073	−.104
p (two-tailed)	.204	.009	.183	.033	.323	.183
History						
Pearson correlation	−.061	−.328**	−.242**	−.082	−.050	−.242**
p (two-tailed)	.386	.000	.002	.266	.499	.002
Mollification						
Pearson correlation	−.016	−.309**	−.142	−.194**	−.221**	−.142
p (two-tailed)	.824	.000	.068	.008	.002	.068
Cutoff						
Pearson correlation	.003	−.217**	−.114	−.108	−.040	−.114
p (two-tailed)	.971	.003	.144	.143	.593	.144
Entitlement						
Pearson correlation	−.121	−.279**	−.125	−.122	−.149*	−.125
p (two-tailed)	.088	.000	.110	.098	.043	.110
Power orientation						
Pearson correlation	−.080	−.159*	.033	−.079	−.096	.033
p (two-tailed)	.257	.032	.678	.285	.195	.678
Sentimentality						
Pearson correlation	−.088	−.278**	−.101	−.168	−.150*	−.101
p (two-tailed)	.215	.000	.196	.022	.041	.196
Superoptimism						
Pearson correlation	−.071	−.394**	−.143	−.116	−.089	−.143
p (two-tailed)	.317	.000	.067	.114	.228	.067
Cognitive indolence						
Pearson correlation	−.142*	−.289**	−.103	−.085	−.011	−.103
p (two-tailed)	.044	.000	.190	.251	.881	.190
Discontinuity						
Pearson correlation	−.107	−.114	−.140	−.104	−.037	−.140
p (two-tailed)	.131	.123	.073	.159	.619	.073
Problem avoidance						
Pearson correlation	−.134	−.140	−.083	−.133	−.036	−.083
p (two-tailed)	.058	.058	.289	.070	.628	.289
Interpersonal hostility						
Pearson correlation	−.041	−.184*	−.073	−.121	−.113	−.073
p (two-tailed)	.564	.013	.352	.100	.125	.352
Self-assertion						
Pearson correlation	−.027	−.285**	−.204**	−.086	−.054	−.204**
p (two-tailed)	.700	.000	.009	.241	.468	.009
Denial of harm						
Pearson correlation	−.092	−.362**	.002	−.195**	−.183*	.002
p (two-tailed)	.194	.000	.977	.008	.013	.977
Fear of change						
Pearson correlation	−.029	−.122	.028	−.079	−.022	.028
p (two-tailed)	.682	.099	.724	.284	.771	.724

Note: SAQ = Self-Appraisal Questionnaire; PICTS = Psychological Inventory of Criminal Thinking Styles.
*$p < .05$. **$p < .005$.

[p. v4-243 ↓]

In addition, Mahalanobis distance was calculated to check for multivariate outliers. When exploring the four main groups on the PICTS scales, only 5 of 259 cases were found to be in violation of this test. Because this is considered a small number of outliers given the sample size, these 5 cases were retained (Pallant, 2005).

Primary Analyses

Comparing prison tattoos vs. no prison tattoos. A multivariate analysis of covariance (MANCOVA; age as a covariate) procedure examined group differences between inmate participants with prison tattoos, nonprison tattoos, no tattoos, and the college student group on the Current and Historical Criminal Thinking Content Scales from the

PICTS (see Table 2). Results indicated a significant omnibus between-group difference on the two content scales, $F(6, 464) = 11.02$, Wilks's $\Lambda = .766$, $p < .001$. Follow-up univariate analyses and pairwise comparisons indicated statistically significant differences for both the Current, $F(1, 3) = 5.07$, $p = .002$, and Historical, $F(1, 3) = 23.27$, $p < .001$, Criminal Thinking scales as college students scored significantly lower than the three inmate groups on both scales ($p < .05$). In addition, inmates with prison tattoos produced significantly higher scores than the other two inmate groups on the Historical Criminal Thinking Scale ($p < .001$) but not on the Current Criminal Thinking Scale ($p > .05$). There were no statistically significant differences between inmates with no tattoos and inmates with nonprison tattoos on either scale ($p > .05$).

A second MANCOVA procedure examined the four participant groups with respect to the eight criminal thinking scales (i.e., Mollification, Cutoff, Entitlement, Power Orientation, Sentimentality, Superoptimism, Cognitive Indolence, and Discontinuity). Results indicated a significant omnibus between-group difference on the eight criminal thinking scales, $F(24, 681) = 4.146$, Pillai's trace = .382, $p < .001$ (see Table 2). Follow-up univariate analyses, with a Bonferroni corrected alpha level of .006, indicated that college students scored significantly lower than the three inmate groups on the Sentimentality ($p < .001$) and Cognitive Indolence ($p < .001$) scales. College students also had significantly lower scores than the prison tattoo and nonprison tattoo inmate groups on the Mollification ($p < .001$), Cutoff ($p < .002$), Superoptimism ($p < .001$), and Discontinuity ($p < .001$) scales. College students had lower scores than inmates with prison tattoos on the Entitlement ($p < .001$) scale. Inmates with prison tattoos had statistically significantly higher scores than inmates with no tattoos and nonprison tattoos on the Superoptimism ($p < .002$) scale. Inmates with prison tattoos also had statistically significantly higher scores on the Mollification ($p < .002$) scale than inmates with no tattoos. There were no statistically significant differences between any groups on the Power Orientation ($p > .05$) scale. There were no significant

[p. v4-244 ↓]

Table 2: Group comparisons of PICTS scales

	Prison tattoos		Nonprison tattoos		No tattoos		College students		MANCOVA	
	n = 81		n = 75		n = 52		n = 66		Significance	Effect size
Scale	M	SD	M	SD	M	SD	M	SD	F	Partial η^2
Content									11.02*	0.125
CUR	55.137	10.154	52.895	10.253	51.695	10.295	49.545	7.590		
HIS	57.684	10.310	51.781	10.322	49.782	9.720	45.563	7.541		
Thinking style									4.146*	0.127
Mo	51.780	10.644	50.109	9.759	44.565	8.084	45.166	7.968		
Co	55.260	10.798	52.656	10.738	51.347	9.698	48.370	8.485		
En	54.150	9.955	51.375	12.860	47.434	8.274	49.444	8.710		
Po	56.643	11.988	53.093	10.974	51.413	9.597	54.000	9.895		
Sn	52.342	10.562	50.250	10.518	45.195	10.258	38.777	11.055		
So	57.438	11.150	52.265	11.474	47.695	8.129	48.222	7.735		
Ci	55.506	9.254	53.718	10.345	52.217	10.610	48.333	7.640		
Ds	56.054	10.110	53.406	9.943	52.130	11.198	47.000	8.128		
Factor									5.589*	0.108
PRB	54.986	9.513	53.359	9.641	52.847	10.807	49.963	7.403		
HOS	53.863	12.742	52.515	15.304	47.608	9.846	50.290	9.717		
AST	56.794	9.991	51.937	10.341	49.760	9.090	46.818	7.060		
DNH	51.835	9.816	50.406	10.290	45.065	7.992	41.727	8.759		
FOC	53.561	10.345	53.375	10.589	52.521	12.667	47.200	8.161		

Note: Separate MANCOVA procedures assessed differences between (1) prison tattoo inmate group, (2) nonprison tattoo inmate group, (3) no tattoos inmate group, and (4) college students with tattoos group. PICTS = Psychological Inventory of Criminal Thinking Styles; CUR = Current Criminal Thinking; HIS = Historical Criminal Thinking; Mo = Mollification; Co = Cutoff; En = Entitlement; Po = Power Orientation; Sn = Sentimentality; So = Superoptimism; Ci = Cognitive Indolence; Ds = Discontinuity; PRB = Problem Avoidance; HOS = Interpersonal Hostility; AST = Self-Assertion; DNH = Denial of Harm; FOC = Fear of Change; Content = Content Scales; Thinking Styles = Thinking Styles Scales; Factor = Factor Scales. Values are based on *T* scores.

*$p < .006$.

[p. v4-245 ↓]

differences between the nonprison tattoo group and the no tattoo group on any of the scales ($p > .05$).

A third MANCOVA procedure examined the four participant groups with respect to the five Factor and Special Scales (i.e., Problem Avoidance, Interpersonal Hostility, Self-Assertion, Denial of Harm, and Fear of Change). Results indicated a significant omnibus between-group difference on the five content and special scales, $F(15, 693) = 5.589$, Pillai's trace = .324, $p < .001$ (see Table 2). Follow-up univariate analyses, with a Bonferroni corrected alpha level of .010, indicated college students had significantly lower scores than the prison tattoo and nonprison tattoo inmate groups on the Self-Assertion, Denial of Harm, and Fear of Change ($p < .003$) scales. College students had significantly lower scores than inmates with prison tattoos on the Problem Avoidance ($p = .001$) scale. Inmates with prison tattoos had significantly higher scores than the other two inmate groups on the Self-Assertion subscale ($p < .003$) and higher than inmates with no tattoos on the Denial of Harm subscales ($p = .009$). There were no significant differences between inmates with nonprison tattoos and inmates with no tattoos on any scales ($p > .05$). There were no statistically significant differences between any groups on the Interpersonal Hostility ($p > .05$) scale.

Results of the analysis of covariance (ANCOVA; age as the covariate) procedure examined the four participant groups with respect to the Self-Appraisal Questionnaire Total score (SAQ Total). There was a significant omnibus between-group difference on the SAQ Total, $F(3, 238) = 63.426$, $p < .001$. Pairwise comparisons indicated that

college students had significantly lower scores on the SAQ Total Score than the three inmate groups ($p < .001$). Pairwise comparisons also indicated that inmates with prison tattoos had statistically significantly higher scores than the two inmate groups ($p < .001$). There were no significant differences between inmates with nonprison tattoos and inmates with no tattoos ($p = .132$).

Results of the ANOVA procedure examined the three main inmate groups and total self-reported number of convictions. There was no statistically significant omnibus between-group difference on the total number of convictions, $F(2, 25) = 1.194$, $p = .305$.

An ANCOVA (time served on current sentence as covariate) procedure examined the three inmate groups and total number of self-reported disciplinary infractions. There was a significant omnibus between-group difference on the total number of self-reported disciplinary infractions, $F(2, 582) = 5.492$, $p = .005$. Pairwise comparisons indicated that inmates with prison tattoos had significantly greater totals of self-reported disciplinary infractions ($M = 8.04$, $SD = 15.620$) than inmates with nonprison tattoos ($M = 2.16$, $SD = 2.631$) and inmates with no tattoos ($M = 3.38$, $SD = 5.613$, $p < .010$). There was no significant difference between the nonprison tattoo group and no tattoo group ($p = .973$).

[p. v4-246 ↓]

Comparing inmates with greater and lesser skin surface covered with tattoos. Results of MANCOVA procedures (age as the covariate) that examined group differences between inmates with greater and lesser skin surface covered with respect to the PICTS indicated no significant omnibus between-group difference for the Current and Historical Criminal Thinking Content Scales, $F(2, 121) = 2.319$, Wilks's $\Lambda = .963$, $p = .103$; the eight criminal thinking scales, $F(8, 115) = 0.892$, Pillai's trace = .058, $p = .526$; or the five factor and special scales, $F(5, 118) = 0.489$, Wilks's $\Lambda = .980$, $p = .784$.

An independent-samples *t* test was performed to compare the SAQ Total scores for inmates with greater and lesser skin surface covered. Results indicated no statistically significant difference in scores for inmates with greater skin surface covered ($M = 33.26$, $SD = 10.66$) and inmates with lesser skin surfaced covered ($M = 30.06$, $SD = 11.30$) on the SAQ Total score, $t(124) = -1.635$, $p = .105$. Another independent-samples *t* test was

performed to examine group differences for the total number of self-reported disciplinary infractions and also indicated no statistically significant difference in scores for inmates with greater skin surface covered (*M* = 7.07, *SD* = 15.82) and inmates with lesser skin surfaced covered (*M* = 5.06, *SD* = 8.04), *t*(111) = -0.828, *p* = .409.

Comparing inmates with visible and nonvisible tattoos. MANCOVA procedures (age as covariate) examined between-group differences for inmates with and without visible tattoos and revealed no statistically significant group differences for the Current and Historical Criminal Thinking Content Scales, *F*(2, 179) = 2.173, Wilks's Λ = .976, *p* = .117; the eight criminal thinking scales, *F*(8, 173) = 1.795, Wilks's Λ = .923, *p* = .081; or the five factor and special scales, *F*(5, 176) = 1.385, Wilks's Λ = .962, *p* = .232.

Independent-samples *t* tests were performed to compare the SAQ Total scores and self-reported disciplinary infractions for inmates with visible and nonvisible tattoos. There was a statistically significant difference on SAQ total scores as inmates with visible tattoos produced higher recidivism risk scores (*M* = 33.16, *SD* = 10.58) than inmates with no visible tattoos (*M* = 25.45, *SD* = 10.95), *t*(197) = -4.940, *p* < .001. There was also a statistically significant difference between inmates with visible and nonvisible tattoos with regard to disciplinary infractions with inmates possessing visible tattoos receiving more disciplinary infractions (*M* = 7.21, *SD* = 15.14) than inmates with no visible tattoos (*M* = 3.11, *SD* = 4.90), *t*(176) = -2.275, *p* = .025).

Comparing inmates with antisocial and non-antisocial tattoos. Results of MANCOVA procedure (age as covariate) indicated no statistically significant differences between inmates with antisocial and non-antisocial-themed tattoos on the Current and Historical Criminal Thinking Content Scales, *F*(2, 179) = 1.926 Wilks's Λ = .979, *p* = .149, or the five factor and special scales, *F*(5, 176) = 1.478, Pillai's trace = .040, *p* = .199, of the PICTS. However, results of a MANCOVA procedure that examined the two inmate groups with respect to the eight criminal thinking scales indicated a significant omnibus group difference on the eight criminal thinking scales, *F*(8, 173) = 2.042, **[p. v4-247 ↓]** Pillai's trace = .086, *p* = .044. Follow-up univariate analyses, with a Bonferroni corrected alpha level of .006, indicated that inmates with antisocial-themed tattoos scored significantly higher than inmates with non-antisocial tattoos on the Mollification (*p* = .004) scale. There were no significant differences between groups on any other thinking styles scale (*p* > .006).

Independent-samples *t* tests were performed to compare the SAQ Total scores and disciplinary infractions for inmates with antisocial and non-antisocial-themed tattoos. Results indicated a statistically significant difference in recidivism risk scores with inmates who had antisocial-themed tattoos producing a higher SAQ Total score (M = 32.05, SD = 10.71) than inmates with non-antisocial-themed tattoos (M = 25.90, SD = 11.28), $t(197) = -3.902$, $p < .001$. In addition, inmates with antisocial-themed tattoos self-reported a greater number of disciplinary infractions (M = 6.95, SD = 14.78) than inmates with non-antisocial-themed tattoos (M = 3.03, SD = 4.51), $t(95) = -2.333$, $p = .022$.

Discussion

Results indicated that inmates with prison tattoos appeared to harbor a greater commitment to the criminal lifestyle with an irrational perception of entitlement, or sense of power, that the other inmates and college students did not demonstrate. In addition, inmates with prison tattoos tended to blame others for their involvement in criminal activity, and minimized and rationalized the harm inflicted on others as a result of their own criminal activities (Walters, 1990), compared to inmates without prison tattoos and college students with tattoos. Immaturity is inherent in these thinking styles as they both capture an inability to accept responsibility for one's actions.

Inmates with prison tattoos were at greatest risk for recidivism as compared to all other groups (i.e., inmates with nonprison tattoos, inmates with no tattoos, and college students with tattoos); however, there were no statistically significant differences between the inmates with prison tattoos and inmates with nonprison tattoos or inmates without tattoos with regard to the number of criminal convictions. This finding may appear contradictory, as those who are at higher risk for recidivism have a higher number of total convictions (Holland, Holt, & Beckett, 1982). However, on further examination, inmates with prison tattoos had the highest average number of convictions (mean of 6 convictions, range of 5 to 7), followed by the nonprison tattoo group (mean of 5 convictions, range of 4 to 6), and the no tattoo group had the lowest average number of convictions (mean of 4 convictions, range of 4 to 6). Thus, although power likely limited the ability to detect statistical significance, practically it appears that on average, inmates with prison tattoos are likely to enter prison with a greater number of

convictions than their counterpart inmates without prison tattoos and inmates with no tattoos.

[p. v4-248 ↓]

Walters (1990) indicated that career criminals are generally well behaved during periods of incarceration. Unexpectedly, it was found that inmates with prison tattoos were more likely to act out and receive a greater number of disciplinary infractions than inmates without prison tattoos and inmates with no tattoos. Although this finding appears to contradict Walters' (1990) theory, of these three inmate groups, inmates with prison tattoos are the group of inmates that should be of greatest concern to correctional staff in terms of management problems and therefore staff resources.

There were no statistically significant differences between inmates with greater skin surface covered and inmates with less skin surface covered with regard to criminal thinking, recidivism, and number of self-reported disciplinary infractions. The tattoo literature explores differences between individuals with tattoos in a variety of ways, including the amount of skin surface covered. Given today's "tattoo renaissance" (DeMello, 2000; Langellier, 2001; Sanders, 1989; Velliquette & Murray, 2002) and perhaps greater societal acceptance of tattooing behavior (see television programs Miami Ink or LA Ink as well as tattoo magazines for examples of media interest), it is reasonable to suggest that the amount of skin surface covered with tattoos may be of little importance. This has been explored in the tattoo literature (see Vail, 1999), and people who choose to acquire tattoo sleeves, back pieces, or body suits can be perceived as simply "collectors" and not as pathological. Results of this study produced similar conclusions as inmates with greater percentage of skin covered were not statistically significantly different (i.e., criminal thinking, risk for recidivism, disciplinary infractions) than inmates with less skin surface covered.

Although tattoos may be more acceptable in today's culture, there remains a stigma within even the tattoo community that hands, neck, and head are to be left undecorated (Steward, 1990). For professional appearances as well as the avoidance of stigma, there has been a long-standing belief that tattoos should be limited to areas that can be covered by clothing (Steward, 1990). Although no group differences emerged with regards to criminal thinking styles in this study, inmates with visible tattoos evidenced

greater risk of recidivism and institutional behavior problems than inmates with non-visible tattoos. It seems reasonable to suggest that visible tattoos may create problems (e.g., difficulties finding gainful employment) for inmates when they are released back into society.

Regarding criminal thinking, inmates with antisocial-themed tattoos scored higher than inmates with non-antisocial-themed tattoos on only one subscale (Mollification) of the PICTS; however, inmates with antisocial-themed tattoos were at greater risk of recidivism and were more likely to present as institutional behavior problems for staff than inmates with non-antisocial-themed tattoos. The decision to acquire tattoos that have antisocial themes (e.g., hostile messages, aggressive, vulgar, morbid, or demonic images, or dire circumstances, or images or themes of societal rules violations) may be diagnostic.

[p. v4-249 ↓]

Of the endless possibilities of tattoo images, these inmates chose images that communicate anger, hostility, and vulgarity. It was expected that inmates with antisocial-themed tattoos would have thinking styles aligned with a criminal lifestyle; however, these inmates only evidenced increased likelihood for blaming others for their criminal involvement. Perhaps this tendency to blame others is connected to antisocial-themed tattoos in particular.

Results of this study have implications for psychologists in the criminal justice system, particularly when it comes to assessment or mental health/institutional screenings. Taking note of inmates who have prison tattoos, visible tattoos, or antisocial-themed tattoos may help correctional staff identify inmates who may be more likely to present as behavioral problems. Planning could also occur during the initial screening assessment, as well as repeat assessments, to scan for newly acquired tattoos. These screenings could influence placements within institutions, that is, housing assignments. These inmates could also be targeted as inmates to direct toward any rehabilitation programming geared toward reducing recidivism and increasing chances of successful life changes following their incarceration (e.g., career and educational programs, family programs, counseling services). Additional planning efforts could include advising staff to be mindful and alert when working with similarly tattooed inmates, as well as the

development of appropriate correctional management strategies to reduce institutional problems.

In addition, results of this study may be useful for those wishing to create a formal measure of tattooing behavior or in updating future versions of current instruments that include items related to tattooing, such as the Lifestyle Criminality Screening Form (Walters, White, & Denney, 1991). This instrument assesses for visible tattoos and body surface covered with tattoos. Given the results of the present study, assessing antisocial content and the presence of prison tattoos specifically may prove valuable.

A symbolic mechanism indicating changed beliefs and behaviors is to consider removal of prison, antisocial-themed, or visible tattoos. Tattoo removal programs are available outside prison (Bazan, Harris, & Lorentzen, 2002); however, tattoo removal programs within correctional settings may prove beneficial as well. Some inmates expressed regret regarding some of their tattoos in their responses. They, of course, would be excellent candidates for such programs and may find that the removal of such tattoos could result in a smoother and more positive transition into society.

On the other hand, institutional management of prison tattooing may also prove beneficial, particularly with reducing or eliminating prison and antisocially themed or visible tattoos. Such a program has been enacted in Canadian prisons (Krauss, 2005). Although results of this program remain to be determined, such programs offer promise. Tattooing programs also have the potential to reduce the acquisition of problematic tattoos that negatively affect inmates' positive opportunities upon release. An opportunity to acquire tattoos in a prison tattoo parlor could also be used as positive reinforcement **[p. v4-250 ↓]** of good behavior. In addition, institutional management of tattooing could greatly reduce disease transmission, a common problem in correctional facilities (Godin, Gagnon, Alary, Noel, & Morisette, 2001; Krebs, 2002; Rotily, Weilandt, & Bird, 2001).

Limitations of the study included being unable to obtain historical information (e.g., criminal history, disciplinary history) for each inmate, which affected the research questions that sought to explore the possible connections between tattooing and institutional behavior. Also, cautious interpretation of the ability to predict recidivism via tattoos is warranted given the results of the SAQ, a measure that purely captures

recidivism sans items related to tattoos, were linked to tattoos themselves. There were also difficulties in accessing sick calls or any information related to health concerns because of the Health Insurance Portability and Accountability Act regulations. Although inmate self-report of criminal behavior, including institutional behavior, is reliable (Kroner, Mills, & Morgan, 2007) questions related to institutional behavior remain tentative. Because variables in this study, including tattoos and information assessed by the PICTS and SAQ, were based on self-report, it is possible that shared method variance may have contributed to the significant positive correlations that were detected. Another limitation was the lack of power necessary to properly analyze racial and ethnic differences.

Future research could examine tattooing behavior and its possible correlations with criminal thinking, recidivism, and institutional behavior in other regions of the United States and among different racial and cultural groups. In addition, future research may continue to explore the issue of gang, prison, and antisocial-themed tattoo removal. Removal of gang tattoos is a statement about leaving gang life (Bazan, Harris, & Lorentzen, 2002). Could the removal of prison tattoos similarly signify leaving a criminal lifestyle? More importantly, could tattoo removal lead to a change in criminal behavior and subsequently becoming a productive member of society? Some participants in this study indicated a desire to remove some of their tattoos as they harbored regret about some of their tattoo choices. Should a robust finding to these questions emerge, tattoo removal programs may be a meaningful way for inmates to make a lifestyle change.

Notes

1. The authors are appreciative of reviewers' feedback, which resulted in an improved manuscript. Of note, one reviewer was particularly concerned about the appropriateness of including a college student sample as a comparison group with an inmate sample. We appreciate the conceptual issues of comparing inmates, the majority of whom are antisocial and have likely had rather different life experiences than college students, the majority of whom are unlikely to have antisocial traits and who are unlikely to relate to a life of crime or prison life from firsthand experiences. In addition, the authors appreciate the limitations of using recidivism measures with a college student group, **[p. v4-251 ↓]** the majority of whom had never been jailed or imprisoned.

Nevertheless, we elected to retain this comparison group as a point of comparison and as a referent group representing individuals with a tattooing lifestyle that is noncriminal in nature.

2. The demographic breakdown of participants in the various groups (i.e., inmates with prison tattoos [*n* = 81], inmates with nonprison tattoos [*n* = 75], inmates with no tattoos [*n* = 52], college students with tattoos [*n* = 61]), inmates with greater skin surface covered with tattoos [*n* = 67], inmates with lesser skin surface covered with tattoos [*n* = 62], inmates with visible tattoos [*n* = 83], inmates with nonvisible tattoos [*n* = 125], inmates with antisocial tattoos [*n* = 89], and inmates with non-antisocial tattoos [*n* = 121]) is available on request.

References

Anderson, R. R. Tattooing should be regulated New England Journal of Medicine (1992). vol. 32, pp. 207.

Armstrong, M. L. Career-oriented women with tattoos Image - The Journal of Nursing Scholarship (1991). vol. 23, pp. 215–220.

Armstrong, M. L., Owen, D. D., Roberts, A. E., and Koch, J. R. College students and tattoos: The influence of image, identity, family, and friends Journal of Psychosocial Nursing and Mental Health Services (2002a). vol. 40, pp. 20–29.

Armstrong, M. L., Owen, D. D., Roberts, A. E., and Koch, J. R. College tattoos: More than skin deep Dermatology Nursing (2002b). vol. 14, pp. 317–323.

Baden, M., & Roach, M. (2001). Dead reckoning: The new science of catching killers . New York, NY: Simon & Schuster.

Bazan, L. E., Harris, L., and Lorentzen, L. A. Migrant gangs, religion, and tattoo removal Peace Review (2002). vol. 14, pp. 379–383.

Birmingham, L., Mason, D., and Grubin, D. The psychiatric implications of visible tattoos in an adult male prison population Journal of Forensic Psychiatry (1996). vol. 10, pp. 687–695.

Braithwaite, R., Robillar, A., Woodring, T., Stephens, T., and Arriola, K. J. Tattooing and body piercing among adolescent detainees: Relationship to alcohol and other drug use Journal of Substance Abuse (2001). vol. 13, pp. 5–16.

Buentello, S. Combating gangs in Texas Corrections Today (1992). vol. 54, pp. 58–60.

Butler, J. R., Trice, J., and Calhoun, K. Diagnostic significance of the tattoo in psychotic homicide Journal of Social Therapy (1963). vol. 14, pp. 110–113.

DeMello, M. The convict body: Tattooing among male American prisoners Anthropology Today (1993). vol. 9 (6), pp. 10–13.

DeMello, M. (2000). A cultural history of the modern tattoo community . Durham, NC: Duke University Press.

Drews, D. R., Allison, C. K., and Probst, J. R. Behavioral and self-concept differences in tattooed and nontattooed college students Psychological Reports (2000). vol. 86, pp. 475–481.

Etter, G. W. Skinheads: Manifestations of the warrior culture of the new urban tribes Journal of Gang Research (1999). vol. 6 (3), pp. 9–21.

Frederick, C. M. and Bradley, K. A. A different kind of normal? Psychological and motivational characteristics of young adult tattooers and body piercers North American Journal of Psychology (2000). vol. 2, pp. 380–393.

Godin, G., Gagnon, H., Alary, M., Noel, L., and Morisette, M. R. Correctional officers' intention of accepting or refusing to make HIV preventive tools accessible to inmates AIDS Education and Prevention (2001). vol. 13, pp. 462–473.

Harry, B. Tattoos, body experiences, and body image boundary among violent male offenders Bulletin of the American Academy of Psychiatry & the Law (1987). vol. 15, pp. 171–178.

Holland, T. R., Holt, N., and Beckett, G. E. Prediction of violent versus nonviolent recidivism from prior violent and nonviolent criminality Journal of Abnormal Psychology (1982). vol. 91, pp. 178–182.

Jankowski, M. (2004, September). Paños - Art behind bars . Skin & Ink , pp. 30–33.

Koch, J. R., Roberts, A. E., Cannon, J. H., Armstrong, M. L., and Owen, D. C. College students, tattooing, and the health belief model: Extending social psychological perspectives on youth culture and deviance Sociological Spectrum (2005). vol. 25, pp. 79–102.

Krauss, C. (2005). A prison makes the illicit and dangerous legal and safe . The New York Times . Retrieved from http://www.nytimes.com/2005/11/24/international/americas/24bath.html

Krebs, C. P. High-risk HIV transmission behavior in prison and the prison subculture The Prison Journal (2002). vol. 82, pp. 19–49.

Kroner, D. G., Mills, J. F., and Morgan, R. D. Underreporting of crime-related content and the prediction of criminal recidivism among violent offenders Psychological Services (2007). vol. 4, pp. 85–95.

Langellier, K. M. (2001). “You're marked”: Breast cancer, tattoo, and the narrative performance of identity . In J. Brockmeier, ed. & D. Carbaugh (eds.), Narrative and identity: Studies in autobiography, self and culture (pp. pp. 145–184). Amsterdam, Netherlands: John Benjamins.

Laumann, A. E. and Derick, A. J. Tattoos and body piercings in the United States: A national data set American Academy of Dermatology (2006). vol. 55, pp. 413–421.

Levy, J., Swell, M., and Goldstein, N. A short history of tattooing Journal of Dermatological Surgery and Oncology (1979). vol. 5, pp. 851–856.

Loza, W. (2005). Self-Appraisal Questionnaire . North Towanda, NY: MHS.

Loza, W., Conley, M., and Warren, B. Concurrent cross validation of the Self-Appraisal Questionnaire: A tool for assessing violent and nonviolent recidivism and institutional adjustment on a sample of North Carolina offenders International Journal of Offender Therapy and Comparative Criminology (2004). vol. 48, pp. 85–95.

Loza, W., Dhaliwal, G., Kroner, D. G., and Loza-Fanous, A. Reliability, construct, and concurrent validities of the Self-Appraisal Questionnaire: A tool for assessing violent and nonviolent recidivism Criminal Justice and Behavior (2000). vol. 27, pp. 356–374.

Manuel, L. and Retzlaff, P. D. Psychopathology and tattooing among prisoners International Journal of Offender Therapy and Comparative Criminology (2002). vol. 46, pp. 522–531.

Mills, J. F., Loza, W., and Kroner, D. G. Predictive validity despite social desirability: Evidence for the robustness of self-report among offenders Criminal Behaviour and Mental Health (2003). vol. 13, pp. 140–150.

Newman G. The implications of tattooing in prisoners Journal of Clinical Psychiatry (1982). vol. 43, pp. 231–234.

Palermo, G. B. Tattooing and tattooed criminals Journal of Forensic Psychology Practice (2004). vol. 4, pp. 1–25.

Pallant, J. (2005). SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 12) . New York, NY: Open University Press.

Phelan, M. P. and Hunt, S. A. Prison gang members' tattoos as identity work: The visual communication of moral careers Symbolic Interaction (1998). vol. 21, pp. 277–298.

Post, R. S. The relationship of tattoos to personality disorders Journal of Criminal Law, Criminology & Police Science (1968). vol. 59, pp. 516–524.

Raspa R.F. and Cusack, J. Psychiatric implications of tattoos American Family Physician (1990). vol. 41, pp. 1481–1486.

Rotily, M., Weilandt, C., and Bird, S. M. Surveillance of HIV infection and related risk behaviour in European prisons: A multicentre pilot study European Journal of Public Health (2001). vol. 11, pp. 243–250.

Sanders, C. R. (1989). Customizing the body: The art and culture of tattooing . Philadelphia, PA: Temple University Press.

Steward, S. M. (1990). Bad boys and tough tattoos: A social history of the tattoo with gangs, sailors, and street-corner punks 1950–1965 . New York, NY: Haworth.

Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics (5th ed.). Boston, MA: Allyn & Bacon.

Taylor, A. J. W. Tattooing among male and female offenders of different ages in different types of institutions Genetic Psychology Monographs (1970). vol. 81, pp. 81–119.

Vail, D. A. Tattoos are like potato chips … you can't have just one: The process of becoming a collector Deviant Behavior: An Interdisciplinary Journal (1999). vol. 20, pp. 253–273.

Velliquette, A. M., & Murray, J. B. (2002). The new tattoo subculture . In S. J. Ferguson (ed.), Mapping the social landscape: Readings in sociology (pp. pp. 68–80). Mountain View, CA: Mayfield.

Walters, G. D. (1990). The criminal lifestyle . Newbury Park, CA: Sage.

Walters, G. D. The Psychological Inventory of Criminal Thinking Styles: Part I. Reliability and preliminary validity Criminal Justice and Behavior (1995). vol. 22, pp. 307–325.

Walters, G. D. (2006). The Psychological Inventory of Criminal Thinking Styles (PICTS) professional manual . Allentown, PA: Center for Lifestyle Studies.

Walters, G. D., White, T. W., and Denney, D. The lifestyle criminality screening form: Preliminary data Criminal Justice and Behavior (1991). vol. 18, pp. 406–418.

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