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## Abstract

This study examined the correspondence between the Millon Adolescent Clinical Inventory (MACI) and the Personality Inventory for Youth (PIY) in a sample of 105 incarcerated juvenile offenders. Intercorrelations between MACI and PIY scales ranged from -.66 to .67; 191 (79%) of the 243 correlations were statistically significant ( $p < .05$ ). However, diagnostic correspondence between the two instruments was modest, with kappa coefficients for five pairs of conceptually similar scales (e.g., MACI Delinquent Predisposition and PIY Delinquency) ranging from .04 to .56. Surprisingly, most juvenile offenders did not obtain clinically significant elevations on the MACI (43) and PIY (19) delinquency scales.

## Rationale

The high rate of mental disorders among juvenile offenders creates a compelling need for diagnostic screening measures (McCann, 1999). The MACI and the PIY are two popular self-report inventories designed for use with adolescents in clinical settings. Clinicians might want to know how the two instruments compare when administered to the same subjects and what pattern of clinical elevations can be expected in a juvenile offender population.

## Study Questions

1. Are there ethnic or age effects on scale scores?
2. How do the two measures compare in terms of frequency of elevated scale scores?
3. What is the level of correspondence between MACI and PIY scales?
4. What is the level of diagnostic agreement between conceptually similar MACI and PIY scales in identifying youth with clinical elevations?

## Methods

The sample for the present study consisted of adolescent males ( $N=105$ ) incarcerated at a state juvenile corrections intake facility. Mean age was 13.7 (range 13 to 18). The ethnicity of the youth in the sample were 49% African-American, 43% White, 6% Hispanic, and 3% Other. Youth were selected randomly from a series of consecutive weekly admissions over a 7-month period.

The PIY is a 270 item, self-report measure that was administered by staff members at the detention center as part of the standard intake and evaluation process. It contains 9 clinical scales and designates *T* scores of 70+ as clinically elevated. The MACI, a 160-item self-report measure, was administered individually by researchers. It consists of 27 scales measuring Clinical Syndromes, Personality Patterns and Expressed Concerns. For the MACI, base rate scores greater than 75 indicate that a given characteristic is *clinically present* in an individual.

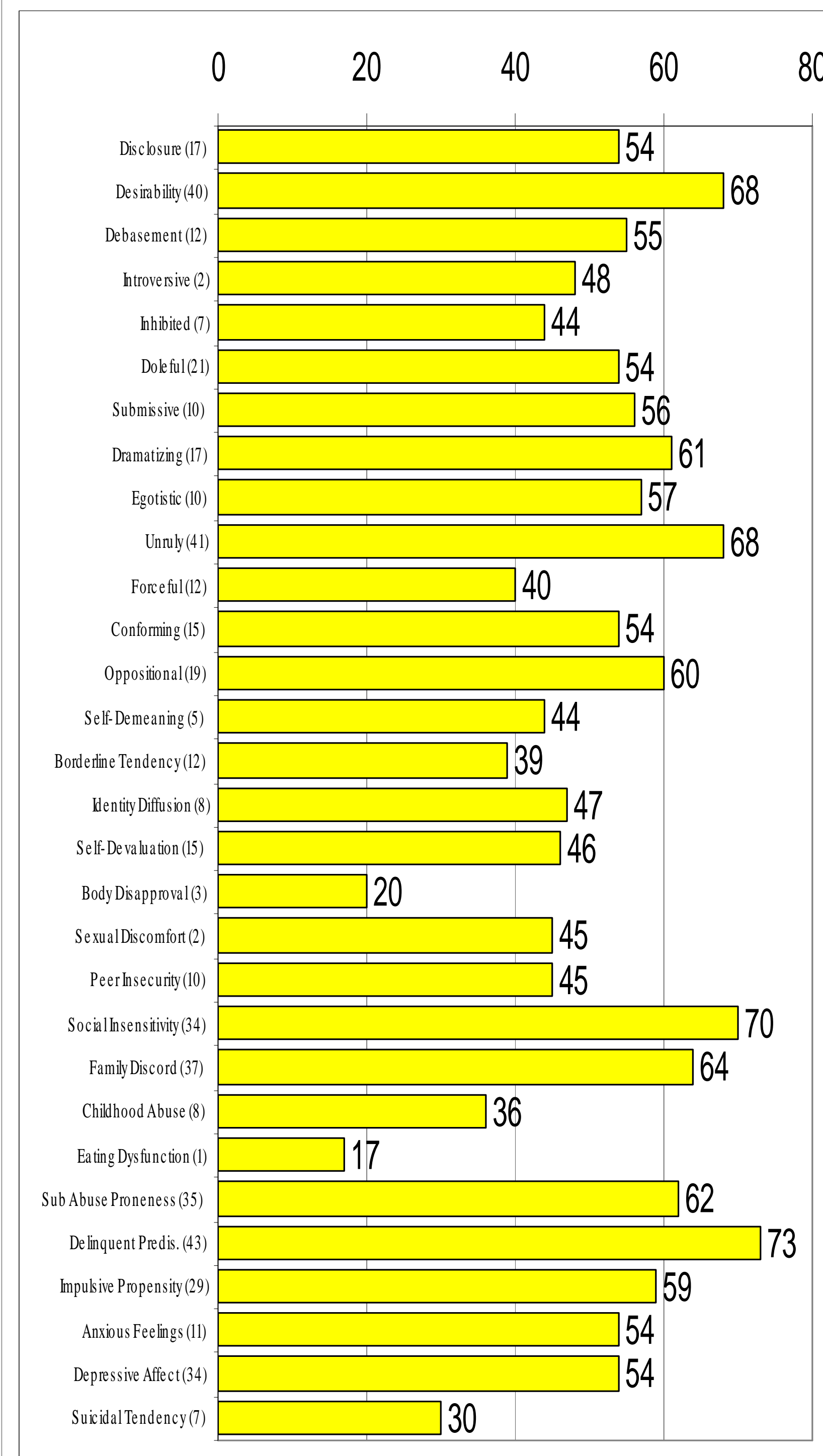
## Results

### 1. Age and Ethnic Effects

**MACI.** Age correlated significantly with only one scale (Body Disapproval,  $r = -.24$ ). A MANOVA on race (White vs. African-American, omitting 9 others) revealed no main effect for race, Wilk's  $\lambda = .64$ ,  $F(30, 65) = 1.21$ ,  $p = .25$ .

**PIY.** Age correlated significantly with only one scale (Family Dysfunction,  $r = .22$ ). A MANOVA revealed a main effect for race, Wilk's  $\lambda = .72$ ,  $F(13, 82) = 2.51$ ,  $p < .01$ . Follow-up univariate analyses revealed that White youth scored higher than African-American youth on Cognitive Impairment (COG) ( $\lambda = .07$ ), Delinquency (DLQ) (.06), and Family Dysfunction (FAM) (.06). African-American youth scored higher than White youth on Defensiveness (.09). Because high scores on the Defensiveness scale indicate denial that could affect other scale elevations, we repeated the race comparisons after controlling for Defensiveness. This subsequent analysis revealed no main effect for race, Wilk's  $\lambda = .79$ ,  $F(12, 82) = 1.83$ ,  $p = .06$ .

MACI Profile for 105 Juvenile Offenders



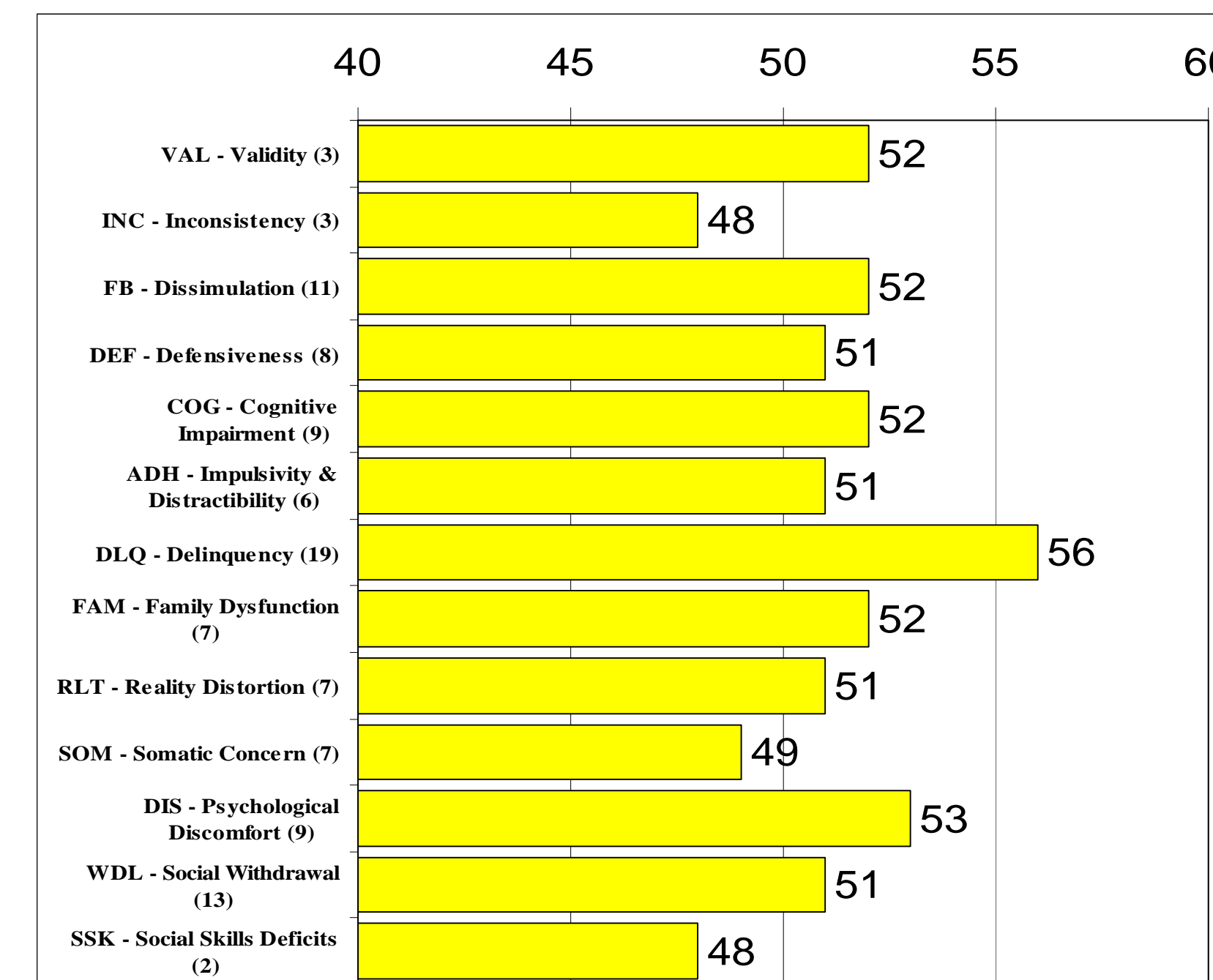
Number of elevations > 75 listed in ( ) after scale name.

Correlations of MACI and PIY Scales

MACI/PIY Scales	COG	ADH	DLQ	FAM	RLT	SOM	DIS	WDL	SSK
<b>Personality Patterns</b>									
Introversive	.25	.19	.03	.14	.39	.23	.43	.47	.54
Inhibited	.21	.19	.06	.11	.33	.31	.37	.46	.52
Doleful	.41	.42	.41	.35	.45	.42	.47	.30	.30
Submissive	-.25	-.28	-.47	-.30	-.26	-.24	-.24	-.04	.06
Dramatizing	-.45	-.34	-.27	-.30	-.55	-.48	-.66	-.59	-.55
Egotistic	-.46	-.35	-.27	-.27	-.52	-.46	-.61	-.51	-.47
Unruly	.26	.29	.53	.33	.11	.08	.04	-.13	-.23
Forceful	.25	.28	.51	.34	.28	.19	.23	.03	-.05
Conforming	-.48	-.51	-.63	-.44	-.54	-.52	-.55	-.32	-.20
Oppositional	.46	.44	.51	.28	.46	.40	.43	.30	.25
Self-Demeaning	.39	.37	.35	.30	.43	.45	.43	.36	.36
Borderline Tendency	.35	.47	.57	.39	.46	.42	.43	.24	.16
<b>Expressed Concerns</b>									
Identity Diffusion	.44	.48	.47	.41	.55	.45	.57	.37	.32
Self-Devaluation	.40	.52	.39	.40	.60	.56	.63	.54	.45
Body Disapproval	.21	.17	.16	.20	.26	.34	.44	.36	.26
Sexual Discomfort	-.34	-.35	-.54	-.33	-.27	-.23	-.23	-.07	.05
Peer Insecurity	.16	.22	.03	.11	.38	.36	.43	.55	.53
Social Insensitivity	-.01	.06	.26	.12	-.08	-.13	-.12	-.24	-.31
Family Discord	.21	.30	.51	.46	.15	.14	.14	-.06	-.13
Childhood Abuse	.27	.44	.40	.41	.45	.58	.52	.34	.24
<b>Clinical Scales</b>									
Eating Dysfunction	.12	.17	.13	.18	.26	.35	.42	.42	.26
Substance Abuse Proneness	.39	.42	.55	.41	.39	.38	.34	.13	.04
Delinquent Predisposition	.11	.11	.35	.16	-.03	-.08	-.14	-.31	-.36
Impulsive Propensity	.35	.47	.68	.42	.36	.33	.30	.13	.02
Anxious Feelings	-.22	-.18	-.42	-.22	-.11	-.06	-.04	.10	.18
Depressive Affect	.46	.46	.44	.38	.57	.57	.66	.52	.44
Suicidal Tendency	.33	.40	.34	.33	.40	.45	.48	.27	.21

**N = 105. Correlations  $\geq .20$  are significant at  $p < .05$ . Correlations  $\geq .26$  are significant at  $p < .01$ . Key to PIY abbreviations in Figure below.**

PIY Profile for 105 Juvenile Offenders



Number of elevations > 70 listed in ( ) after scale name.

## 2. Profiles and Clinical Elevations

Mean profiles and number of protocols with clinical elevations are reported in the Figures. The MACI scales producing the most frequent elevations  $>75$  were Delinquent Predisposition (43) and Unruly (41). The PIY scales with the most frequent elevations  $\geq 70$  were Delinquency (19) and Social Withdrawal (13).

## 3. MACI and PIY Correspondence

Correlations ranged from -.66 to .67; 191 (79%) of the 243 correlations were statistically significant at the .05 level. Correlations between pairs of conceptually similar scales are marked in yellow. To investigate the possibility that the large number of statistically significant correlations was due to shared variance in test-taking attitude, we dropped 27 protocols that had elevations on one or more of the MACI or PIY validity scales. However, this did not make a substantive difference in the magnitude of correlations. (Complete results are available upon request.)

## 4. Agreement between conceptually similar scales

We compared conceptually similar pairs of MACI and PIY scales to assess their agreement in identifying adolescents as clinically elevated. The five hypothesized correlations (yellow cells in table) were: (1) PIY Delinquency and MACI Delinquent Predisposition (Agreement = 69%,  $\lambda = .105$ , not significant); (2) PIY Impulsivity and Distractibility with MACI Impulsive Propensity (87%,  $\lambda = .058$ , ns); (3) PIY Family Dysfunction with MACI Family Discord (87%,  $\lambda = .300$ ,  $p < .01$ ); (4) PIY Psychological Discomfort with MACI Anxious Feelings (86%,  $\lambda = .040$ , ns) and (5) Depressive Affect (91%,  $\lambda = .563$ ,  $p < .01$ ).

## Conclusions

There were a large number of statistically significant correlations between the MACI and PIY, but the pattern of correlations was not clearly meaningful. Although there were substantial correlations between conceptually related pairs of scales (e.g., MACI and PIY delinquency scales correlated .35), there were also many correlations among conceptually disparate scales (e.g., MACI Childhood Abuse and PIY Somatic Concern correlated .52), suggesting a lack of discriminant validity. Future work might investigate whether the broad correspondence between MACI and PIY scales may be due to some common underlying factors, such as general anxiety or general test-taking attitude.

Despite the large number of significant correlations, closer inspection of the data indicates limited diagnostic agreement between the MACI and PIY. Kappa coefficients for pairs of conceptually similar scales were low or non-significant. Notably, measures of delinquency and ADHD-like behavior demonstrated relatively low chance-corrected agreement. Also of concern, fewer than one-half of these incarcerated juvenile offenders obtained an elevation on the MACI (43) and PIY (19) measures of delinquency.

Future studies should examine the comparative validity of the MACI and the PIY using multiple external criteria (e.g., use of structured diagnostic interviews by reliably trained raters) and both offender and non-offender samples. Our findings suggest that clinicians should be cautious in their choice of self-report personality instruments for incarcerated juvenile offenders.

### References

- Lachar, D., & Gruber, C.P. (1995). *Personality Inventory for Youth (PIY) manual: Administration and Interpretation. Technical Guide*. Los Angeles: Western Psychological Services.
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