The Competence-Related Abilities of Women Criminal Defendants

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A new research instrument, the MacArthur Structured Assessment of Competencies of Criminal Defendants (MacSAC-CD), was administered to three groups of women defendants: those adjudicated incompetent and committed to forensic hospitals for treatment ($n = 38$), jail inmates receiving mental health treatment ($n = 18$) who had not been adjudicated incompetent, and randomly selected jail inmates ($n = 50$). Measures of the competence-related abilities of understanding and reasoning were found to have satisfactory indices of internal consistency (coefficient α), and all measures correlated in the expected direction with measures of global psychopathology, psychoticism, and verbal cognitive functioning. Between-group mean scores were all in the expected direction and were statistically significant for four of seven measures. No differences in MacSAC-CD performance were found in comparisons of male and female defendants who had been adjudicated incompetent, nor were differences found in the performance of male and female jail inmates.

In his review of the state of the art at the end of the last decade, Grisso[1] concluded that advances in both research and clinical practice in the area of competence to stand trial have been stymied by deficiencies in the instruments available to investigators and mental health practitioners:

[A]fter two decades of research to improve CST [competence to stand trial] evaluations, . . . examiners still are without any instrument offering standardized administration and scoring . . . to assess the domain of [competence]-related abilities . . . . Without an objective measure of the legally-relevant abilities, development of a research foundation for the field of [competence] assessment will continue to be limited (pp. 366, 367).

Beyond the limitations on research and practice imposed by the kinds of instruments currently available, there is a particular dearth of knowledge in the field regarding the competence-related abilities of women defendants. Nicholson and Kugler[2] reviewed 30 studies of competent

and incompetent defendants and reported that the overwhelming majority of defendants studied (89.5%) have been men. Many studies evaluating existing competence assessment instruments have either (1) not reported whether/how many female subjects were included in their sample,[3, 4] (2) used very small samples of women (e.g., Nicholson *et al.*[5] used only 8.6% female defendants), or (3) excluded women altogether.[6] Thus, what is known about the utility of existing competence measures is limited largely to what is known about their performance with male defendants.

Overview of the Present Study

We recently reported the development and psychometric properties of a new research instrument, the MacArthur Structured Assessment of the Competencies of Criminal Defendants (MacSAC-CD),[7] based on a large field study with 366 male defendants. The MacSAC-CD provides standardized administration, criterion-based scoring, and quantitative indices of several competence-related abilities derived from a comprehensive theory of legal competence.[8, 9] With male defendants, the MacSAC-CD was demonstrated to have satisfactory psychometric properties and classification utility; the measures reliably distinguished relevant groups of defendants and were sensitive to changes in functional legal abilities as clinical condition improved over the course of treatment.

In this article, we describe the performance of the MacSAC-CD in a parallel study that focused exclusively on the competence of women criminal defendants. The MacSAC-CD was administered to women defendants in jails in Virginia and Florida and to women who had been adjudicated incompetent to proceed and admitted to state forensic hospital programs for competence restoration. We describe the psychometric properties of the MacSAC-CD, explore its capacity to distinguish between relevant groups of women defendants, and evaluate its overall utility as a research measure with women defendants. In addition, we compare the performance of women defendants with that of male defendants as previously reported.[7]

Methods

Participants Eligibility criteria for the study included the following: participants must be between 18 and 65 years of age (inclusive), have an estimated IQ $\geq$ 60, and not have a primary diagnosis of organicity. Female participants in Virginia and Florida were recruited from three groups of defendants. The hospitalized incompetent group (HI, $n = 38$) was recruited from criminal defendants who had been committed to public sector forensic inpatient units in Virginia and Florida for restoration of competence to proceed to adjudication. The primary control group comprised women jail inmates who had not been screened (unscreened) for psychopathology (JU, $n = 50$); in Florida, an additional comparison group, comprising women receiving mental health treatment in the jail for reasons other than competence restoration (JT, $n = 18$), was recruited.

Potential HI participants were identified via the admissions office at the state

hospitals participating in the research. An attempt was made to recruit participants within the first week of hospitalization to minimize the effects of treatment on subjects' performance on the research protocol (actual mean time to assessment was 6.3 days, SD = 3.3, range, 1–14 days). JU and JT participants were recruited in Florida using lists of jail inmates provided weekly by participating public defender offices. These lists were screened by the jail nurses to determine who was receiving mental health treatment (JT) and who was not (JU); from these lists, inmates were approached on a random basis. In Virginia, JU and JT subjects were identified at the jail and randomly selected.

Measures Prior history (social, clinical, and criminal justice) and demographic information was obtained from participants' self-reports and by reviewing the available (jail or hospital) files.

Current psychopathology was assessed using the Brief Psychiatric Rating Scale (BPRS).[10] Based on a brief (15-minute) interview and observations, ratings are made on the BPRS regarding the severity of symptom presentation in 18 symptom categories using a seven-point Likert scale. In this study, we used the anchored version of the BPRS, which provides descriptive cues for each point on the Likert scales and which has been demonstrated to be a reliable measure of psychopathology (BPRS-A).[11] In addition, we calculated four subscale scores that provide measures of psychoticism, depression, withdrawal, and hostility.[12]

Three subtests (vocabulary, similarities, digit span) from the Wechsler Adult Intelligence Scale-Revised (WAIS-R) were used to generate an index of subjects' verbal cognitive capacities (VCF) at the time of the research interview. Prorated verbal IQ scores based on these subtests correlate highly ($r > .90$) with WAIS-R Verbal IQ (see Grisso and Appelbaum,[13] p. 154), and thus the index was used as a screen to exclude from the study persons likely to have significant mental retardation (VCF < 60). For those persons who were recruited into the study, particularly those experiencing acute mental disorder, this index is better conceived as an index of current verbal cognitive functioning than as an index of baseline intellectual functioning, given that some cognitive functions are likely to be impaired by their mental disorder.

The primary dependent measures were the MacSAC-CD measures. These measures are described in considerable detail elsewhere.[7] Briefly, competence is conceived to be composed of two primary legal domains, competence to assist counsel (CAC) and decisional competence (DC). Within each of those domains, three relevant abilities are measured using separate sets of items. These abilities are labeled *understanding* (U) (the capacity to comprehend, at a descriptive level, relevant legal information); *appreciation* (A) (the ability to apply descriptive legal information in a rational way to one's own case or circumstances); and *reasoning* (R) (the ability to draw inferences or to engage in meaningful costs-and-benefits analyses about potential legal options). The seven MacSAC-CD outcome measures are defined by combinations of these legal and abilities acronyms:

- CAC-U (understanding general legal information);
- CAC:A (rationally applying general legal information to one's own case);
- CAC:R (reasoning within the framework of assisting counsel);
- DC:U-PG (understanding general legal information relevant to the legal decision whether to plead guilty);
- DC:U-WJ (understanding general legal information relevant to the legal decision whether to waive a jury and request a bench trial);
- DC:A (rationally applying general legal information in thinking about decisions faced in one's own case); and
- DC-R (reasoning about decisions faced in one's own case).

Procedures Each participant was approached by a research assistant and invited to participate in the study. Consent to participate was obtained after disclosure of the relevant information regarding the purpose and nature of the study, confidentiality of responses, compensation ($10) for time contributed to the study, anticipated risks and benefits, voluntary nature of participation, and other required human subjects information. The three WAIS-R subtests were then administered to insure an estimated verbal IQ $\geq$ 60, and history and demographic information were solicited by interview. The Mac-SAC-CD was administered next, followed by the BPRS-A. The entire protocol required approximately 2.5 hours to administer. Research assistants were encouraged to break the test administration into two sessions if the participant

Table 1
Patienthood Measures by Group

	HI	JT	JU
Diagnosis (%)			
Schizophrenia	45	22	0
Affective disorder	45	56	6
No diagnosis	0	22	84
Other	10	0	10
Treatment history (%)			
Inpatient history	79	72	14
Outpatient history	76	67	34

appeared fatigued, but to try to complete both sessions on the same day.

Results

Sample Characteristics The mean age of the sample was 32.7 years (SD = 9.07). A little more than half of the participants (58%) were African American, 78 percent were not married at the time of recruitment into the study, and 56 percent had been either unemployed or working in unskilled positions prior to their most recent arrest. The mean number of years of education was 11.6 years (self-report) (SD = 2.29).

Table 1 displays patienthood measures, including diagnosis and treatment history, by group (HI, JT, JU). A greater proportion of participants with schizophrenia was found in the HI group relative to the other two groups (χ^2 (2, 21 df) = 22.57, $p <$ .001), while a greater proportion of JU participants received no diagnosis (χ^2 (2, 45 df) = 68.13, $p <$ .001). Affective disorder, however, was greater in both the HI and JT groups than in the JU (χ^2 (2, 30 df) = 9.80, $p <$ .007).

Predictably, a significantly greater proportion of participants in the HI and JT

groups reported a history of prior inpatient (χ^2 (2, 106 df) = 42.01, p < .001) and outpatient (χ^2 (2, 106 df) = 16.85, p < .001) treatment.

For all three experimental groups, scores on the primary clinical measures are shown in Table 2. VCF is an index of current verbal cognitive functioning based on three subscales of the WAIS-R, and BPRS-A Total score is a global measure of current psychopathology. The differences between mean scores for HI, JT, and JU females on these measures were not statistically significant.

Psychometric Properties of the MacSAC-CD Internal consistency of the MacSAC-CD was examined by calculating coefficient α for each measure except DC:A. DC:A consists of only two items and therefore a Pearson correlation coefficient was calculated. Item-to-total correlations were also calculated for each measure. These indices are shown in Table 3.

The highest α values were obtained on the measures of understanding (CAC:U, DC:U-PG, DC:U-WJ). These α levels are well within the generally accepted range for research measures (r ≥ .70), but slightly below the recommended mini-

Table 3
Internal Consistency Indicators

Measure	α Value	Item-Scale Correlation
CAC-U	.84	.35–.54
CAC-R	.61	.24–.40
CAC-A	.32	.04–.27
DC:U-PG	.82	.38–.60
DC:U-WJ	.84	.42–.62
DC:R	.65	.09–.53
DC:A	.44	

mum (r ≥ .90) for decision making in applied settings.[14] Slightly lower, but still respectable α scores (.61-.65) were obtained for the reasoning measures, although α was low for CAC:A (.32).

Similar findings are obtained by examining the item-scale correlations. Item-total correlations ≥ .30 are usually considered good,[14] and most items on the understanding and reasoning measures meet or exceed this level. Again, performance of the CAC:A was poor on this criterion for reliability.

Convergent and divergent validity were investigated by examining the correlations between MacSAC-CD measures and clinical measures (VCF and BPRS-A). Prior research has established that competence determinations are negatively correlated with psychotic symptoms and low intelligence [1, 2, 7, 13, 15] Table 4 displays the correlations obtained between the experimental measures and VCF, BPRS-A total score, and the psychoticism and depression subscales of the BPRS-A for the HI group. Generally, the expected pattern of correlations was found. The correlations found between VCF and MacSAC-CD performance and those between the psychoticism scale and

Table 2
Psychopathology and Verbal Cognitive Functioning by Group

	HI	JT	JU
VCF			
Mean	88.74	83.61	87.16
SD	11.08	10.99	10.86
BPRS-A Total			
Mean	36.63	32.72	33.48
SD	7.43	8.29	7.45

Table 4
Correlations Between Experimental Measures and Clinical Measures[a]

	VCF	Psychoticism	Depression	Total
Competence to assist counsel				
CAC:U	.57	−.57	.38	−.17
CAC:R	.38	−.15	.48	−.12
CAC:A	−.05	−.12	.06	−.30
Decisional competence				
DC:U-PG	.58	−.44	.37	.02
DC:U-WJ	.55	−.45	.43	.07
DC:R	.50	−.45	.34	.04
DC:A	.34	−.29	.32	.16

[a] All correlations except those that are underlined are significant ($p < .05$).

MacSAC-CD performance are similar to those reported for male defendants.[7]

Mean Scores and Group Comparisons on the MacSAC-CD A primary objective of this study was to investigate the ability of the MacSAC-CD to discriminate the competence-related abilities of various female defendant groups. The three columns on the right side of Table 5 show the mean scores (and standard de-

viations) for the HI, JT, and JU female defendant groups. As expected, a main effect was found (Pillais $F(14,162) = 2.39$, $p < .01$) covarying for the effects of VCF, socioeconomic status (SES), and education (exploration of demographic and background variables revealed that SES and education had correlated at the level of .3 or greater with one or more MacSAC-CD measures). No differences

Table 5
Mean MacSAC-CD Scores: Gender by Group

		Males			Females		
		HI $n = 131$	JT $n = 101$	JU $n = 87$	HI $n = 33$	JT $n = 17$	JU $n = 41$
CAC:U	Mean	17.95	20.19	21.52	17.73	19.47	19.95
(0–26)	SD	5.55	4.30	3.30	5.08	3.12	4.05
CAC:R	Mean	8.58	10.05	10.33	9.06	9.88	10.02
(0–12)	SD	2.93	1.98	1.68	2.69	1.93	1.96
CAC:A	Mean	10.44	11.10	11.55	11.21	11.88	11.56
(0–12)	SD	2.11	1.80	1.06	.89	.48	1.25
DC:U-PG	Mean	13.27	16.64	17.26	13.15	15.35	16.02
(0–20)	SD	4.74	3.47	2.63	4.24	3.48	3.00
DC:U-WJ	Mean	16.74	20.04	20.49	17.00	20.41	20.17
(0–24)	SD	5.07	3.95	2.81	4.75	2.18	3.15
DC:R	Mean	11.72	13.96	14.05	10.64	13.53	13.44
(0–26)	SD	3.18	2.38	2.19	2.93	2.24	2.38
DC:A	Mean	3.30	3.80	3.92	3.61	3.71	3.80
(0–4)	SD	1.09	.60	.31	.83	.98	.51

were found between the scores of the JT and JU groups; therefore, these groups were combined for comparisons with the HI group. Multivariate analyses of covariance (MANCOVAs) with planned contrasts comparing HI versus JT and JU means revealed significant differences for four of the seven measures: CAC:U (t (1, 89) = -2.61, $p < .01$), DC:U-PG (t (89) = -3.46, $p < .001$), DC:U-WJ (t (89) = -4.73, $p < .001$), and DC:R (t (89) = -5.25, $p < .001$. No reliable differences were found for CAC:A, DC:A, or CAC:R.

Gender Comparisons on the MacSAC-CD Generalizability of the MacSAC-CD across gender was an important component to the study. The three columns on the left side of Table 5 show the previously reported mean scores (and standard deviations) for the HI, JT, and JU male defendant groups.[7]

Between-gender comparisons were examined separately for each group (HI, JT, and JU) for the seven MacSAC-CD measures. Covariates important to each gender group were included within a multivariate analysis. Thus, in addition to the covariates identified in the sample of women defendants (VCF, SES, and education), age, criminal justice history, and contact with attorney were included.[7] No gender differences were observed within the HI or JU treatment groups for any of the experimental measures. It was not possible to make a valid comparison among the JT groups.*

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*A significant main effect was found between the JT groups (Pillais F (7,104) = 2.16, $p < .04$). However, none of the univariate effects achieved significance at the .05 level. Tests of homogeneity of variance reveal that the assumption of equal variance for both groups was violated (BOX M = 92.56, $p < .000$). A larger sample of JT women would provide a more coherent picture of this particular relationship.

Discussion

Previous studies of criminal defendants' competence-related abilities for the most part have not investigated the abilities of female defendants.[16] Interview guides or structured measures of "competence to stand trial" have been developed using male research participants and then made available to the field without examining whether (or how) the proffered measures "work" with female defendants.

In contrast, our development of the MacSAC-CD has involved separate studies of male and female defendant samples. Results previously reported offer considerable evidence that the MacSAC-CD has satisfactory psychometric properties and may be useful in distinguishing the competence-related abilities of relevant groups of male defendants. The present findings, using comparable samples of female defendants, generally echo the previous results.

We also note, however, that the MacSAC-CD may have somewhat less power to discriminate relevant groups of female (versus male) defendants. In the study of male defendants,[7] statistically significant differences between adjudicated incompetent defendants (HI group) and two comparison groups of jail inmates (JT and JU groups) were found on each of the seven MacSAC-CD measures. In contrast, similar differences were obtained with only four of the seven measures in the female sample. However, the female defendants' scores, as well as the standard deviations of scores, on each of the seven MacSAC-CD measures were remarkably similar to those found in the larger sample of male defendants. There-

fore, it is likely that the failure to find significant differences on three of the seven measures was a result of the smaller sample size in the current study and the concomitantly lower statistical power.

Psychometric indices of reliability were similar across gender samples, although the internal consistency indices for the CAC:A measure was poor in the female sample. Between-gender comparisons suggest that performance on the MacSAC-CD is not generally affected by the defendants' gender. Direct comparisons of adjudicated incompetent and randomly selected groups of jail defendants suggest that comparable groups of male and female defendants have similar competence-related abilities.

In summary, the MacSAC-CD offers the field a theory-based, psychometrically sound, structured assessment approach that yields quantitative indicators of performance on multiple competence-related abilities. Our data suggest that these research measures can be used without fear that gender-related differences might color the interpretation of results. As our research group moves forward with efforts to develop a streamlined, clinical version of the MacSAC-CD for potential use in forensic practice, we do so with the confidence that our measures will be appropriate for use with male and female defendants alike.[17]

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