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Predictive Validity of the MMPI–2 Restructured Clinical (RC) Scales in a Batterers' Intervention Program

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We examined the convergent and discriminant validity of the MMPI–2 Restructured Clinical (RC) scales in predicting relevant historical variables, treatment success, and recidivism in offenders enrolled in a batterers' intervention program. We used a sample studied previously by Petroskey, Ben-Porath, and Erez (2002), which included an ethnically diverse group of 483 men enrolled in a psychoeducational batterer's intervention program. We coded various historical variables (e.g., criminal history, substance abuse problems, mental health treatment, anger problems, and amount of partner violence), treatment dismissal, and recidivism up to 1 year posttreatment. Correlational analyses with the historical variables provided evidence of convergent and discriminant validity of the RC scales in this forensic sample. Regression analyses showed that these scales added to the historical variables in predicting treatment failure and recidivism. Relative risk analyses indicated the extent to which individuals entering treatment with elevated scores on RC4 and RC9 were at increased risk for these negative outcomes.

Domestic violence is a major societal problem. It is the leading cause of injury in women in the United States, and 33% of all female murder victims are battered to death. Domestic violence has also been attributed to 25% of female suicides. Approximately 850,000 violent crimes were committed against women by their partners in 1998 (Bureau of Justice Statistics, 2000), and other estimates suggest that a woman is battered by her partner every 12 s. These figures, however, are likely to be underestimates of domestic violence, as many of these incidents go unreported for various reasons (e.g., fear of consequences).

Treatment programs for batterers were initiated in the 1970s (Gondolf, 1997). Several research studies have examined the effectiveness of such programs with mixed results (Gondolf, 1997; Scott & Wolfe, 2000). It is important to understand who will successfully complete the program and will not recidivate. Resources tend to be scarce, and courts could optimally mandate such treatments if they knew who would be most likely to complete them. Research has identified several characteristics related to treatment success. These factors are important because studies have indicated lower levels of recidivism in treatment completers when compared to treatment dropouts. Variables such as education, marital status, number of children, minority status, and income seem to be positively related to treatment completion (Babcock & Steiner, 1999; Cadsky, Hason, Crawford, Lalonde, 1996; Chen, Bersani, Myers, & Denton, 1989; Grusznski & Carrillo, 1988; Hamberger & Hastings, 1988; Saunders & Parker, 1989; Wexler & DeLeon, 1977). Other historical variables such as criminal history, less stable work histories, and unemployment (Babcock & Steiner, 1999; Cadsky et al., 1996; DeMaris, 1989; Grusznski & Carrillo, 1988; Hamberger & Hastings, 1988; Pirog-Good & Stets, 1985; Rooney & Hanson, 2001; Saunders & Parker, 1989) and clinical conditions such as substances abuse and narcissism are also related to treatment failure (Gondolf, 1999; Rooney & Hanson, 2001). Higher rates of general violence have also been found in those that drop out of batterers' treatment programs (Hamberger & Hastings, 1988).

A few studies have been designed specifically to predict recidivism (i.e., domestic violence after treatment has concluded). One study indicated that approximately 20% of men completing treatment recidivate violently within 15 months (Gondolf, 1997). Other studies have found that alcohol abuse (DeMaris & Jackson, 1987), past violent behavior (Chen et al., 1989; Gondolf & White, 2001), age, substance abuse, and prior criminal history (Gondolf & White, 2001) predict recidivism in a batterers' treatment context.

Personality assessment instruments have not been systematically examined in predicting these negative outcomes. The Minnesota Multiphasic Personality Inventory–2 (MMPI–2; Butcher et al., 2001) has been found to have utility in predicting treatment failure and recidivism in other settings (e.g., Hober & Danchy, 1975; Kalichman, Shealy, & Craig, 1990; Keegan & Lacher, 1979; Krisak, 1978); however, no published research has examined its utility in a batterers' intervention setting. Petroskey, Ben-Porath, and Erez (2002) reported preliminary support for using the MMPI–2 Clinical, Content, and Personality Psychopathology Five (PSY–5) scales in predicting treatment outcome and recidivism using this study sample. More specifically, Petroskey et al. found that the Antisocial Practices (ASP) Content scale, Disconstraint (DISC) PSY–5 scale, and the MacAndrew Alcoholism Scale–Revised (MAC–R) significantly predicted treatment failure (rs = .15–.18). Petroskey et al. also found that ASP, DISC, the Cynicism Content scale, Neuroticism/Negative Emotionality PSY–5 scale, and the Addiction Admission scale significantly predicted recidivism (rs = .15–.17). However, these researchers did not have access to the Restructured Clinical (RC; Tellegen et al., 2003) scales. The RC scales are relatively homogeneous measures that are appropriately free of demoralization or general emotional unhappiness, which saturates the Clinical scales (Tellegen et al., 2003) and

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also other commonly used self-report measures (Ben-Porath, 2005). This specificity leads to improved prediction of distinct clinical symptoms and personality characteristics (e.g., Sellbom & Ben-Porath, 2005; Sellbom, Ben-Porath, & Graham, 2006; Tellegen et al., 2003).

As indicated in the introduction to this Special Series (Ben-Porath & Tellegen, 2008/this issue), no published research to date has evaluated the RC scales in forensic settings. Such examination is needed to determine whether, as expected, the correlates obtained in other settings can be generalized to forensic settings as well.

The Current Study

The goals of this study were twofold. First, we examined the convergent and discriminant validity of the RC scales in predicting relevant historical variables among offenders enrolled in a batterers' intervention program. We hypothesized that RC4 and RC9 would be particularly associated with past criminal and externalizing behavior, much like the original MMPI findings with the Clinical scales (Hathaway & Monachesi, 1953, 1957) and more recent research with psychopathy (Sellbom, Ben-Porath, Lilienfeld, Patrick, & Graham, 2005). We hypothesized that RC3 and RC6 would be primarily associated with externalization of blame (Sellbom & Ben-Porath, 2005) but not criminal history, substance abuse, or violence. Because previous research has found that individuals who are prone toward antisocial behavior and reactive violence also score high on measures of negative emotionality (e.g., Krueger, Caspi, Moffitt, Silva, & McGee, 1996; Sher & Trull, 1994), we hypothesized that RC scales with such a component (RCd and RC7) would be related to partner violence and antisocial behavior.

The second goal was to examine the validity of the RC scales in predicting treatment outcome and recidivism in a forensic setting. An important question within this examination is whether the RC scales can add unique information above and beyond background variables that past research has identified as being related to treatment outcome and recidivism. We hypothesized that externalizing scales (RC4 and RC9) would be particularly potent in measuring these negative outcomes. We finally examined the relative risk (RR) associated with elevated RC scale scores that were identified as consistently predicting negative outcomes to inform decision makers more directly of the implications of elevated scores.

Method

Study Setting

We conducted the study at a batterers' intervention program in northeastern Ohio. Clients were first time male domestic violence offenders who were court mandated to complete the treatment program as part of their sentence.[1,2] The goals of the treatment were to prevent recidivism and to educate offenders on the conditions leading up to an incident of domestic violence and develop a "safety plan" to avoid engaging in this type of abuse. Offenders were assigned randomly to an outpatient treatment program of varying lengths (6, 12, or 24 weeks) and attended weekly psychoeducational domestic violence treatment sessions.[3] Offenders were considered to have completed the treatment successfully if they attended all sessions, adhered to the program protocol, and passed an exam based on the program content. This sample was previously used by Petroskey et al. (2002) to examine the Clinical, Content, and PSY–5 scales before data on the RC scales were available.

Participants

Participants were 596 men who were assigned to the batterers' intervention program between September 1997 and August of 1998. Participants with invalid (Cannot Say $\geq$ 30, VRIN & TRIN T $\geq$ 80, F (raw) $\geq$ 30, F_P T $\geq$ 100, and L T $\geq$ 80) MMPI–2 protocols were excluded from the study. The final sample consisted of 483 men with an average age of 34.70 years ($SD = 8.77$). The ethnic distribution was 50.3% African American, 40.4% White, 4.6% Hispanic, and remaining 4.7% of other or mixed ethnicity. Most participants had never married (36.6%), were married (31.3%), or were divorced (20.9%). The participants had an average of 11.67 ($SD = 1.88$) years of education. Participants who produced invalid MMPI–2 protocols were significantly younger, $t(594) = 94.5$, $p < .001$, $d = .28$; less educated, $t(587) = 2.43$, $p < .05$, $d = .26$; and more likely to be of minority ethnic status, $\chi^2(1, N = 596) = 8.22$, $p < .01$, $\Phi = .12$.

Measures

MMPI–2. The MMPI–2 RC scales were used in the study. Tellegen et al. (2003) report extensive psychometric characteristics for these scales. In this investigation, internal consistencies were .89 (RCd), .79 (RC1), .70 (RC2), .83 (RC3), .77 (RC4), .77 (RC6), .85 (RC7), .76 (RC8), and .81 (RC9).

Intake interview. Historical data were collected as part of an intake interview and entered directly into a database. This information included criminal history, current charges, employment information, anger frequency, prior mental health history, and information regarding substance use. We specifically examined three aggregate variables that were composed of the mean standardized score of individual items: criminal history (aggregate of number of prior arrests, range = 0–11; number of misdemeanor convictions, range = 0–5; and number of felony convictions, range = 0–8), substance abuse problems (substance abuse, substance dependence, alcohol problem; each coded 1 = "no" and 2 = "yes"), and conduct problems (juvenile history of running away, stealing, school suspensions, violent behaviors,

[1] The program purported to select only males who were convicted on their first domestic violence offense. However, this is not to say that this was the first act of violence committed by the offender. Many offenders had prior histories of public intoxication, disorderly conduct, and other minor charges that are often the result of a plea bargain down from a domestic violence charge or a common charge when there is not sufficient evidence to support a domestic violence conviction.

[2] Offenders were sentenced to jail for 6 months. That sentence was suspended if the offenders successfully completed the batterers' intervention program. Those who failed to complete had their jail term reinstated.

[3] Varying lengths of treatment were offered as part of the study conditions. The batterers' intervention program's standard length, prior to the study, was 12 weeks. Those assigned to the 12-week program attended one session per week. Those assigned to the 6-week program attended two sessions per week. Men assigned to the 24-week program attended one session per week, but the material presented was half that of the standard session. Although the content of the 24-week session was identical to the 12 and 6-week sessions, offenders spent more time on each topic and related activities (Miller, Gregory, & Iovanni, 2005).

fire setting, and lying; each coded 1= "never," 2 = "sometimes," and 3 = "often"). Moreover, we examined individual variables including current mental health treatment (coded 1 = "no" and 2 = "yes"), anger frequency (coded 1 = "never," 2 = "rarely," 3 = "sometimes," and 4 = "usually"), and amount of partner violence (which ranged from 7–20 times).

Blame externalization score. Intake interviewers also asked the offenders to rate 33 statements that assessed the participants' propensity to externalize blame for abusing their partner. The participants were asked to rate the statements from 1 (*Strongly agree*) to 7 (*Strongly disagree*). Example statements include "Episodes of a man beating his wife are the wife's fault," "A sexually unfaithful wife deserves to be beaten," "A husband has no right to beat his wife even if she breaks agreements (reversed scored)," and "Husbands who batter are responsible for the abuse because they intended it (reverse scored)." The internal consistency of this measure was .81. We reversed all items before summation so that higher scores mean greater blame externalization.

Violence disinhibition confidence score. Intake interviewers asked the participants to rate 13 statements regarding their confidence that they would be able to inhibit violence across a variety of situations. The rating scale ranged from 1 (*Confident that he would not use violence*) to 5 (*Not confident that he would not use violence*). Example statements were "If she deliberately did things to irritate me," "If she spends too much money," "If you feel jealous," and "If she nags or complains a lot." This score had an internal consistency of .89 in this study. Higher scores mean less confidence in the inhibition of violence.

Treatment outcome. Data regarding treatment participation (i.e., attendance) and compliance (i.e., homework completion) was available for 92% of the sample. Participants were considered to have completed the treatment successfully if they attended all sessions and adhered to the program protocol. Reasons for dismissal from the program included missing more than one treatment session (two missed sessions were allowed for those men in the 12-week program), failing to submit urine samples for random drug screens, failure to complete a homework assignment or pay a program fee, being subsequently arrested, engaging in substance abuse, or failing to pass the final examination covering program material. Of the individuals for whom treatment data was available, 155 (34.6%) failed to complete the treatment program.

Recidivism data. Follow-up data collection was attempted for each individual 1 year after program completion, and data were eventually collected for 87% of the initial sample. Information was gathered from participants' probation files and through a search of local police records for indications of subsequent reports of violence, arrests, charges, and convictions. Participants were considered to have recidivated if they had further involvement with the legal system related to domestic violence. This included being in violation of a no contact order, having had a new complaint of domestic violence brought against them, or having had a new arrest or conviction for domestic violence after intake to the treatment program. Of the participants, 198 (47.1%) were found to have recidivated during the 1-year follow-up period.

Procedures

After referral to the program, participants were scheduled for an intake appointment at the treatment facility. They were administered the MMPI–2 by a trained research assistant. A licensed social worker employed by the treatment facility interviewed the participants and gathered demographic and background information. The information was subsequently entered into a research database. Participants' MMPI–2 data were not available to any of the treatment staff and were not used in making any decisions regarding participants' in this program.

RESULTS

Correlational Analyses

We calculated zero-order correlations between RC scales and external criteria. To account for family-wise error, we set alpha at .005 (.05/10 criteria) for statistical significance. Consistent with prior MMPI–2 outpatient correlate studies (e.g., Graham, Ben-Porath, & McNulty, 1999), to be clinically significant, a correlation had to reach an absolute $r \geq .20$.

We first examined the correlations between the RC scales and intake variables. Table 1 shows these correlations. As expected, scales associated with negative emotionality (RCd, RC7) and RC9 were significantly correlated with juvenile conduct problems and violence disinhibition confidence. RC4 was

TABLE 1.—Correlations between RC scales and intake and outcome variables.

Variable	RCd	RC1	RC2	RC3	RC4	RC6	RC7	RC8	RC9
Intake									
Criminal history	.17*	.10	.03	.08	.20*	.07	.15*	.01	.06
Substance abuse problems	.11	.11	.06	−.02	.30*	.00	.10	.06	.09
Juvenile conduct problems	.24*	.11	.04	.08	.50*	.15*	.21*	.15*	.23*
Mental health treatment	.16*	.08	.10	.00	.02	.09	.10	.01	.00
Anger frequency	.16*	.06	.13	.01	.15*	.10	.06	.06	.05
Amount of partner violence	.16*	.02	.07	.07	.23*	.11	.09	.09	.12
Blame externalization score	.11	.15*	.12	.22*	.14	.22*	.15*	.19*	.13
Violence disinhibition confidence score	.32*	.12	.13	.19*	.35*	.19*	.37*	.16*	.33*
Outcome									
Treatment dismissal	.11	.04	.02	.08	.13*	.03	.12	.06	.16*
Recidivism	.13	.04	−.06	.11	.14*	.05	.15*	.08	.16*

Note. RC = Restructured Clinical scale.
* $p < .005$.

TABLE 2.—Correlations between outcome variables and participant background variables.

	Treatment dismissal	Recidivism
Lifetime arrests	.08	.11
Work history	−.02	.01
Current employment	−.03	−.05
Number of children	−.03	−.04
Minority status	.06	.04
Income	−.16*	−.21*
Married	−.05	−.07
Substance abuse history	−.03	.10
Age	−.06	−.11
Years of education	−.10	−.03

*$p < .005$.

TABLE 3.—Hierarchical regression analyses for background variables and RC scales predicting outcome variables.

Block	Variable Entered	R	R^2_{adj}	R^2_{change}	p <	Final β	p<
		Treatment dismissal					
1	Income	.163	.024			−.149	.001
	Substance abuse history	.205	.037	.013	.014	.119	.001
2	RC9	.258	.059	.022	.002	.157	.001
		Recidivism					
1	Income	.214	.043			−.211	.001
2	RC9	.265	.065	.024	.002	.156	.002

Note. Block 1: All background variables using stepwise entry; Block 2: All RC scales using stepwise entry. RC = Restructured Clinical scale.

significantly associated with criminal history, juvenile conduct problems, substance abuse problems, amount of partner violence, and violence disinhibition confidence. RC3 and RC6 were primarily associated with blame externalization scores but with none of the criminal history, violence, or substance abuse variables. RC1, RC2, and RC8 did not meet our clinical significance criteria for any of the intake variables, which is evidence of the discriminant validity of these three scales.

We next examined the correlations between the RC scales and the treatment dismissal and recidivism variables. Table 1 depicts these correlations. Although none of the correlations met our criteria for clinical significance, it is worth noting that even with small overall effect sizes, the MMPI–2 correlates were in line with the RR analyses reported later. The correlational patterns indicate that RC4 and RC9 are the best predictors of negative outcomes in this sample.

Table 2 lists correlations between background variables and treatment dismissal and recidivism variables. These results indicate that individuals with lower income appear at greater risk for failing treatment and recidivism. Of particular note is that with the exception of the correlation between income and recidivism, the correlations reported in Table 2 are generally of lower magnitude relative to those reported in Table 1 for the RC scales.

Hierarchical Regression Analyses

Our next goal was to examine whether the RC scales can add in the prediction of negative outcomes above and beyond background variables that have consistently appeared as predictors in the literature. For this purpose, we conducted hierarchical regression analyses in which we entered the background variables in the first block (stepwise entry; p for entry = .05; p for removal = .10) and the RC scales in the second block (stepwise entry; p for entry = .05; p for removal = .10) in predicting treatment dismissal and recidivism. Table 3 provides the findings of these analyses. We found that RC9 added 2.2% variance beyond income and substance abuse problems in the prediction of treatment outcome.[4] RC9 also added 2.4% variance beyond income in predicting recidivism. Although modest effects, these findings suggest that the RC scales do add beyond demographics in predicting negative outcomes in a batterer's intervention program.

Risk Analyses

Although correlational analyses are informative with respect to the overall magnitude of a relationship between two variables, they say little about the interpretative implications of scores that are elevated at particular levels. We conducted relative risk (RR) analyses to examine the increased risk for a negative outcome associated with elevated ($T \geq 65$ and $T \geq 75$) scores on the RC scales. Although likelihood ratios (see Streiner, 2003) are more prevalent in diagnostic assessment, we elected to use RRs because of their more straightforward interpretability. RRs are calculated based on the ratio of positive predictive power (PPP; the proportion of individuals with a positive test score—RC scale $T \geq 65$ or 75—who have the condition, i.e., treatment failure or recidivism) and the error associated with negative prediction power (NPP) or error (1 – NPP; i.e., 1 minus the proportion of individuals with a negative test score [i.e., nonelevated RC scale] who do not have the condition [i.e., treatment success or nonrecidivism]). Noteworthy is that PPP and NPP are base rate sensitive statistics, and thus, the PPP/(1 – NPP) ratio is only meaningful with naturally occurring base rates (as is the case with this study).

We only examined RC4 and RC9, as these scales were consistently related to both negative outcomes in the correlational analyses. We examined two elevation levels. The probability for a negative outcome (i.e., treatment drop out or recidivism) for men scoring 65T or greater was compared with the probability of the same outcome in those with no scale elevation (i.e., $T < 65$). We repeated this analysis with those men who scored 75T or greater versus those who scored less than 75T. Table 4 shows the relative risk findings for RC4 and RC9 at the two cutoffs along with frequencies for true positive, true negative, false positive, and false negative cells. RR ratios whose 95% confidence interval did not include 1.00 were statistically significant. Our results indicate that individuals with elevated scores on both RC4 and RC9 were at significantly greater risk for negative outcomes. RC9 was the stronger predictor. Individuals who scored above 65T on RC9 were approximately twice as likely to fail treatment, and scores equal to or greater than 75T indicated an almost 2.5 times greater likelihood of treatment failure. In terms of recidivism, individuals with elevated scores on either RC4 or RC9 were of approximately 60% to 70% greater risk to

[4]Although the zero-order correlation between the substance abuse background variable and treatment dismissal was only .03, the standardized beta weight in the final regression model was .12. This finding indicates that substance abuse contributes significantly to the prediction of treatment dismissal when controlling for income.

TABLE 4.—Relative risk ratios for RC4 and RC9 elevations predicting outcome variables.

	TP/FP/FN/TN	RR[a]	95% CI	*r*
Treatment dismissal				
RC4 $T \geq 65$	41/51/114/242	1.39*	1.06–1.83	.11
RC4 $T \geq 75$	9/7/146/286	1.66*	1.06–2.62	.09
RC9 $T \geq 65$	21/10/134/283	2.11*	1.59–2.79	.17
RC9 $T \geq 75$	11/3/144/290	2.37*	1.75–3.22	.17
Recidivism				
RC4 $T \geq 65$	44/38/113/223	1.59*	1.24–2.05	.16
RC4 $T \geq 75$	6/7/151/254	1.24	0.68–2.26	.03
RC9 $T \geq 65$	13/9/144/252	1.63*	1.12–2.35	.11
RC9 $T \geq 75$	5/3/152/258	1.69*	1.01–2.92	.08

Note. RC = Restructured Clinical scale; TP = true positive cell; FP = false positive cell; FN = false negative cell; TN = true negative cell; RR = relative risk ratio; CI = confidence interval.

[a]Positive predictive power/(1 – negative predictive power) may not be identical to RR due to rounding of percentages.

*95% CI does not include 1.00, and thus $p < .05$.

recidivate compared to those without elevations on these scales. Participants who scored 75T or greater on either scale were not meaningfully associated with greater risk of recidivism relative to those who scored 65T or greater.

DISCUSSION

In this study, we sought to examine the empirical correlates of the RC scales in a forensic setting, and more specifically, in a batterer's intervention program. We found that the correlations generally appear to be similar to those obtained in other settings. We also found that in predicting treatment failure and recidivism in this setting, the RC scales can add, albeit modestly, beyond commonly used demographic variables.

Interpretative Implications for RC Scales

RC1, RC2, and RC8 were not meaningfully correlated (i.e., $r \geq .20$) with any of the variables in this investigation. This is indicative of good discriminant validity, as these scales would not be expected to be related to the criminal history, aggression/violence, and recidivism criterion variables used in the study. However, in other studies (Sellbom, Ben-Porath, et al., 2006; Tellegen et al., 2003), these scales are associated with somatization, depression, and psychotic experiences, respectively. It remains to be examined if such relations exist in forensic settings as well.

RCd and RC7 were both related to juvenile conduct problems, violence disinhibition, and recidivism. These findings were expected because individuals prone to engage in reactive violence and antisocial behavior often score higher than average on negative emotionality measures (Hicks & Patrick, 2006; Krueger et al., 1996). However, because these RC scales are associated with general distress, depression, and anxiety in other settings (Sellbom, Ben-Porath, et al., 2006; Sellbom, Graham, & Schenk, 2006; Tellegen et al., 2003), elevations on these scales are not specifically related to antisocial and violent behavior but rather provide evidence for potential personological underpinnings for such behavior (Krueger et al., 1996). Other RC scales predict these characteristics more specifically.

RC3 and RC6 were specifically related to blame externalization. This finding was expected, as both constructs underlying these scales have an alienation component. Individuals who are alienated tend to view others as hostile, disloyal, and vindictive (Tellegen & Waller, 1992) and thus blame others for their misfortunes. These findings also provided support for the discriminant validity of these RC scales, as they were not meaningfully correlated with any of the criminal history, substance abuse, violence, or negative outcome variables.

RC4 had its strongest associations with past criminal behavior, violence, and substance abuse. These correlates mirror what has been found in previous studies (Sellbom, Ben-Porath, et al., 2006; Sellbom, Graham, & Schenk, 2006; Tellegen et al., 2003). An elevation on this RC scale is associated with an increased likelihood for failing to complete the treatment program as well as reoffending within 12 months. These individuals are also likely to have prior histories of abusing substances and engaging in criminal behavior.

Finally, RC9 was related to past juvenile conduct problems and violence disinhibition. It was the best predictor of both treatment outcome and recidivism and was the only RC scale to predict these negative outcomes beyond demographics variables. It was also associated with the greatest risk for treatment failure and recidivism. Given the construct underlying RC9, it should not be surprising why this scale emerged as the best predictor. RC9 measures hypomanic activation, which is particularly tied to aggression of both proactive and reactive nature (Sellbom & Ben-Porath, 2005; Tellegen et al., 2003). High scorers are also likely to be socially dominant and manipulative, grandiose, and impulsive (Sellbom & Ben-Porath, 2005; Tellegen et al., 2003), characteristics that all increase the likelihood for reactive violence toward others (Gondolf, 1999; Rooney & Hanson, 2001).

General Implications

These findings indicate that the RC scales have the potential to provide valuable information in a forensic setting in terms of both concurrent and predictive validity. An individual's RC scale profile should be consulted (after ruling out potential profile invalidity) as one source of information when making decisions concerning management and treatment of individuals convicted of domestic violence. Particularly, RC9 can provide useful information in determining the likelihood that the test taker will successfully complete the treatment program or reoffend in the future. However, this statement must be qualified by the low portion of variance explained by RC scale scores in predicting treatment failure and recidivism; thus, as with any singular piece of assessment information, other sources should be consulted as well. Nevertheless, because resources are often scarce, such information has the potential of being valuable in deciding the appropriate programming and management of domestic violence offenders. Of course these results should be replicated in future research.

Limitations and Future Directions

This study is not without limitations. We examined a very specific forensic setting, a batterer's intervention program in one specific location. Also, there were only men convicted

of domestic violence included in this study. Thus, it becomes important to examine the forensic correlates of the RC scales across other settings such as correctional facilities, forensic pretrial assessment centers, and other forensic treatment facilities. It is important that these studies also include women.

It was not possible to examine the convergent validity of RC1, RC2, and RC8 in this setting, as there was no conceptually relevant criteria to evaluate these measures. Although these RC scales demonstrated good discriminant validity, future studies should examine these scales, including criterion variables concerning somatic preoccupation, depression, and psychosis.

Finally, the measure of recidivism used in this study was also limited. Defining recidivism has traditionally been a problem in this type of research (Eisikovits & Edleson, 1989). Subsequent reports or arrests for abuse were used to define recidivism. A great deal of abuse goes unreported (Kahar, 1998; Steinmetz, 1977), particularly following involvement with the police (Hamberger & Hastings, 1988). Therefore, the sample of nonrecidivists is likely contaminated with those who in fact did recidivate but were not identified, which likely attenuated the correlations found in this study.

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