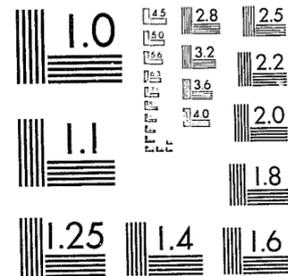


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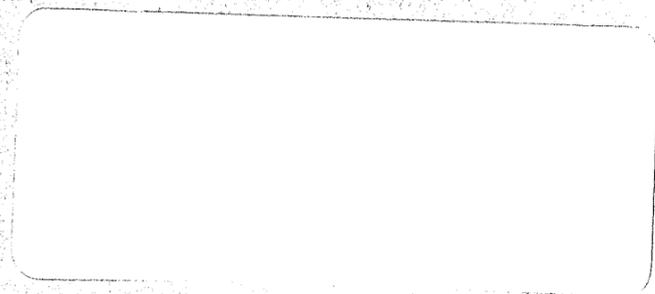
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WORKING PAPERS IN FORENSIC PSYCHIATRY



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The Relationship Between Predictions of
Dangerous Behaviour Made During a Brief
Assessment and the Presence of Dangerousness
in Further Criminal Charges

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The Relationship Between Predictions of Dangerous

Behaviour Made During a Brief Assessment

and the Presence of Dangerousness in Further Criminal Charges

During a four and a half month period, 242 patients were referred to the Metropolitan Toronto Forensic Service (METFORS) by the Court for a brief psychiatric assessment and were rated by a team of clinicians and two external coders with respect to their potential for exhibiting future dangerous behaviour. The accuracy of these predictions of dangerousness will be determined eventually during a follow-up investigation into the future activity of each patient. The general purpose of the study, as well as a detailed description of the procedure, has been provided elsewhere (see Slomen *et al*, 1979, unpublished.)

Since the time of the original brief assessment, eighteen patients from the total sample have been charged with new offences resulting in a reassessment at METFORS.[1] Because the new charges represent the first information available regarding the post-assessment activity of several patients, it was thought that an examination of the original predictions in light of these new charges might prove of value.

Of primary interest was the presence of any dangerous behaviour expressed during the commission of the alleged offence(s). As such, the new charges of each of the eighteen patients were placed in one of two categories depending upon whether dangerous behaviour to others

1. Average time between first and second assessment was almost four months, range one to eight months.

might be inferred from the offence(s) (eg., assault causing bodily harm, armed robbery) or dangerous behaviour to others was clearly absent (eg., theft, fraud). In the case of multiple charges, the most serious offence determined category placement.

Once the nature of the new offence(s) had been established, these data were compared to the predictions of dangerousness (i.e., to others in the future) made by each of the two external coders (since the external coders observed all eighteen patients, while individual clinicians did not). The results of this comparison are presented in Table 1 and Table 2 for coder 1 and coder 2 predictions respectively.

Table 1 - Nature of New Offence(s) X Predictions of Dangerousness* by Coder 1

		Nature of New Offence(s)		Total
		Dangerous	Not Dangerous	
Prediction of Dangerousness	Yes	7	2	9
	No	1	6	7
Total		8	8	16[1]

1. Predictions missing in two cases.

Table 2 - Nature of New Offence(s) X Predictions of Dangerousness* by Coder 2

		Nature of New Offence(s)		Total
		Dangerous	Not Dangerous	
Prediction of Dangerousness	Yes	6	2	8
	No	4	6	10
Total		10	8	18

* On a scale of 1 to 7, 1 to 4 is defined as a "no" prediction, while 5 to 7 is defined as a "yes" prediction.

It is clear from the results shown that the affirmative predictions of dangerousness were correct in a high proportion of cases (i.e., 7 of 9 for coder 1, and 6 of 8 for coder 2). The seven negative predictions made by coder 1 were correct in all but one instance. With respect to negative predictions made by coder 2, the results appear to be less accurate. That is, 40 percent of the patients who were predicted as not being dangerous to others were, in fact, subsequently charged with a dangerous type of offence. The apparent accuracy of coder 1's predictions was confirmed in a Fisher exact probability test, $p < .05$. This same test performed on coder 2 data, however, was not significant.

It should be noted that predictions were originally rated on a seven-point scale representing the likelihood of future dangerous behaviour from extremely low to extremely high. In order to establish whether or not these ratings directly corresponded with the seriousness of the new charges, an attempt was made to place these new charges into one of seven categories according to seriousness (see Appendix A). A Spearman rank correlation coefficient was computed between the prediction ratings for all eighteen subjects (average rating of the two coders) and the degree of seriousness of the new charge. The relationship between prediction ratings and degree of charge seriousness proved insignificant, $r = .115$, showing that a higher prediction rating did not result in a more serious subsequent criminal charge.

It is quite evident from conducting a small-scale study of this nature that observers of a brief assessment interview were able to predict future dangerousness with a fairly high degree of accuracy. Notwithstanding the statistically insignificant pattern of coder 2 data, both sets of results show a relatively large number of correct affirmative predictions and, more surprisingly, a low number of incorrect affirmative predictions (i.e., false positives). The low false positive rates are especially striking since earlier investigations in the area of dangerousness prediction have been forced to deal with high false positive rates. Indeed, a previous paper in this series (Sepejak and Webster, 1979, unpublished) presents results showing a clear over-prediction of dangerousness upon examination of post-prediction inpatient behaviour (although the examination was made within a month after the brief assessment, whereas, in the present study, several months have elapsed since the last patient was observed during a brief assessment).

There are, of course, certain limitations associated with the present study as a test of prediction validity. The behaviour used as a source of comparison for predictions is associated with new criminal charges and not convictions. As such, the allusions to "dangerous" and "not dangerous" may be somewhat premature. The results of the study suggest, however, that prediction accuracy is obtainable. The extent of this accuracy remains to be tested in the larger study of 242 patients where a much longer period of time will elapse before a follow-up observation is made (i.e., two year minimum).

References

Jackson, M.A., Webster, C.D., Butler, B.T. et al. The Effects of Psychiatric Recommendations Upon Court Decisions: A Study of 188 Court-Remanded Assessments in Metropolitan Toronto. METFORS Working Paper No. 8, 1978, unpublished.

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APPENDIX A

<u>Subject</u>	<u>Average Prediction Rating by Coders 1 & 2 (one to seven)</u>	<u>New Charge (Most Serious)</u>	<u>Seriousness of New Charge (one to seven)[1]</u>
020	5	Weapons Dangerous	6
049	5	Causing a Disturbance	1
051	4.5	Robbery	6
053	6.5	Weapons Dangerous	6
067	4	Theft Over \$200	4
092	3	Theft Under \$200	2
100	5	Threatening	5
110	3.5	Theft Over \$200	4
125	6.5	Unlawfully in Dwelling	1
127	4	Common Assault	5
132	5.5	Possession Under \$200	2
141	5.5	Assault Bodily Harm	7
172	2.5	Attempt Theft Over \$200	4
183	4	Failure to Comply	1
188	5.5	Escape Custody	4
203	3.5	Failure To Comply	2
204	4	Armed Robbery	7
225	4	Attempt Robbery	6

$r = .115, p > .05$

1. Adapted from a seriousness ranking of charges by mental health workers in Jackson, et al., Appendix D, METFORS Working Paper #8, 1978, unpublished.

END