A Short Diagnostic Self-rating Scale in the Pre-adult Remand Setting*

By R. COCKETT

INTRODUCTION

The ordinary process of specialist examination of individuals on remand involves among other things the making of judgments of several kinds. Among these judgments are those as to normality, subnormality, abnormality, and types of abnormality. For some, such as the establishment of subnormality, there are technical aids, e.g. standard tests of IQ. For others, available aids are often inadequately standardized, inordinately time-consuming, or subject to other critical objections, e.g. as to their appropriateness. This may leave the specialist clinical observer dependent solely on his clinical acumen over a considerable area. This may not matter as regards the outcome in final judgments made, but may make the process unduly burdensome and lengthy.

Where a population under consideration contains a great proportion of normal individuals, the small proportion of abnormals stands out markedly. However, if the population is preponderantly abnormal and manifests varying psychopathological states, the sub-classifying process assumes a dominant position. This tends more to be the case with that part of the remand population where psychiatric reports are required by the Courts.

This study was stimulated originally by the questions: Is it possible to provide a simple and easily applied aid to the process of psychiatric diagnosis? Can such an aid contribute to the distinguishing among various syndromes that is an essential part of psychiatric diagnosis? How far are conventional psychiatric distinctions appropriate to this population?

* Published by permission of the Home Office, but any views expressed are the author's responsibility.

The Scale and Experimental Trial

Many instruments exist which purport to survey this general field. Frequently, however, they may be objected to on grounds of length of time required for their application or the generality of the categories they yield which makes them more useful as research tools than for clinical diagnosis. What one looks for in our setting is an instrument which is easily and quickly applied to individuals (or, better still, to groups of individuals) and which also can contribute to the differentiating process of diagnosis in the clinical sense. That is, it must be both easy to use and be and appear to be fairly directly appropriate to the clinical task.

Crown and Crisp (1966) developed a diagnostic instrument for use in an out-patient psychiatric clinic. Capable of self-administration, this presented a series of questions leading to scores on each of six sub-scales relating to the following groups of symptoms: anxiety, phobic, obsessional, somatic, depressive, hysteric. This self-rating scale was shown validly to differentiate various psychoneurotic syndromes and to have the necessary reliability characteristics. It was decided to test its usefulness in the remand setting at Ashford Remand Centre, where the intake is of males under 21 years of age. The scale was short-titled the Middlesex Hospital Questionnaire (M.H.Q.) and is so termed hereafter.

For an experimental trial of the scale it was arranged to apply it for 200 successive cases of individuals committed to the Centre for psychiatric reports. The results could then be studied in conjunction with the reports actually prepared by medical officers and submitted to Courts. Results on the scale were not made available to the medical officers, in order to

1141

avoid any interaction, so that whatever sub-classifications emerged from the diagnoses could be determined quite independently, and comparisons with the scale would be thoroughly objective. Intellectually low-grade and illiterate cases were not included, because the scale is presented to the patient for completion by reading and choosing responses from among given alternatives. Such low-grade cases are identifiable by other means and are a sub-group largely if not wholly outside the scope and purpose of this study. Results of routinely applied intelligence tests and also the age of the patients were recorded.

General Characteristics of the Sample

Crown and Crisp followed recognized practice in their standardization of the scale by comparing a sample of psychiatric out-patients "mainly suffering from psychoneuroses, psychosomatic disorders and character disturbances" with a volunteer sample of nurses and medical students as controls. The out-patients are, presumably, in general self-selecting in that they have presented themselves to doctors or to some out-patient department of the hospital because of experienced difficulties. While age was found to be unrelated to scores on the scale, the characteristic of self-selection may clearly be of considerable significance from the motivational aspect.

In contrast, our sample is not self-selected but a sample selected by varying determinants, many probably non-psychiatric. Cases arrive because they are sent with requests for reports from Courts; and no doubt a variety of factors determine the request, among which are detectable from case to case: the unusualness or seriousness of the offence charged or the behaviour alleged, demeanour in Court of the patient, a previous psychiatric history or at least referral, suggestions (psychiatrically informed or otherwise) by probation officers, members of the patient's family, and so on. They may thus not be assumed to be wholly comparable to out-patients presenting in a hospital psychiatric department, nor by any means all to be aware of personal difficulties of a psychiatric nature. It would not be hazardous to expect a proportion of "normal" cases among

them, even though one would also expect a fair proportion of abnormal states.

As regards age, because of the scope of this Remand Centre, the range is restricted to 14–20 years—all but 15 cases being 17 or more years old. However, even within this narrow range it is conceivable that some syndromes may be differentially distributed.

A group of this relatively youthful age, delinquent, and selected by agencies outside their own control, is not necessarily to be expected to respond as readily or as straightforwardly as a "normal" or a "sick" one to an inquisitive instrument. Nor will its characteristics as discovered by such an instrument necessarily be similar. So far as response is concerned, however, this was managed by having the scale administered individually, and in the Centre's hospital setting.

For these reasons it was considered desirable to examine the relationships between results on the scale and both age and intelligence.

RESULTS

Relationship Between M.H.Q.
Total Score and Intelligence

By reason of selective influences our sample is rather more intelligent than the general run of the remand population. We have compared total scores on M.H.Q. with grades A and B *v.* C, D, and E on each of two intelligence tests—Raven's Progressive Matrices and Abstractions (a verbal test). The results are shown in Table I.

The value of χ^2 for the matrices comparison is quite insignificant, whilst that for the abstractions comparison is $2 \cdot 0105$, for which $p > \cdot 10$. It may be concluded from these data that for the population under consideration intelligence level has not influenced scores on the M.H.Q. scale.

Relationship Between M.H.Q. Total Score and Age

The average total score for each of our major age groups is shown in Table II. There is no consistent trend with age. Significance of differences may be checked simply by taking the group with the largest deviation from the mean of the total sample, i.e. the 19-year-olds. The

TABLE I
M.H.Q. and Intelligence

M.H.Q. total score	Intelligence tests			
	Matrices grades		Abstractions grades	
	A, B	C, D, E	A, B	C, D, E
0–38	66	40	60	46
39+	60	34	44	50

TABLE II
Total Score by Age

	Age					
	14–16	17	18	19	20	All ages
Average score	38·4	38·7	35·4	34·1	40·0	38·3
N	15	54	46	42	43	200

standard deviation of the total sample is 16·68 whence it may be calculated that the deviation of the mean for a sample of 42 must equal 5·04 for p = ·05. The actual deviation of the mean for our 19-year-olds is only 4·2. It is apparent that none of our age groups is significantly different from the total sample on total score.

Relationship of Sub-Scales with Age

Conceivably, however, there might be some age distinctions on the sub-scales which purport to assess different symptoms; e.g. there might well be differences in incidence of anxiety or of depression over the 16–20 age range. Sub-scale scores have accordingly been examined also, with the results given in Table III.

Computations similar to those for total scores were made for the larger mean differences of Table III. No age-group is significantly different from the total sample on any sub-scale.

Inter-correlation of Sub-Scale Scores

Crown and Crisp quote data showing the relationship of each sub-scale with clinical ratings of the corresponding symptoms, and also inter-correlations of the sub-scales. They conclude from the latter that the sub-scales "correlate only moderately-to-low among themselves", and so measure fairly different aspects of the psychoneurotic personality.

Our own situation is a little different, since we have not two discrete groups—normals, and patients with recognized difficulties—but a

TABLE III
Average Sub-Scale Scores by Age

Sub-scale				Age						
				14–16	17	18	19	20	All ages	
									Mean	S.D.
A	..	..	..	6·5	6·9	6·7	5·9	7·2	6·7	4·414
P	..	..	..	4·3	5·0	4·8	4·2	5·2	4·8	3·025
O	..	..	..	6·1	7·0	6·9	6·8	7·9	7·1	3·000
S	..	..	..	5·7	5·9	5·9	5·0	5·9	5·7	4·123
D	..	..	..	7·3	6·5	5·8	5·8	6·7	6·3	3·339
H	..	..	..	7·5	7·2	7·1	6·3	6·9	7·0	3·605

TABLE IV

Inter-Correlations of Sub-Scale Scores

		P	O	S	D	H
	N	·37	·21	·37	·50	·21
A	OP	·48	·45	·34	·53	·52
	R	·61	·56	·76	·73	·36
	N	—	·?3	·23	·27	·08
P	OP	—	·45	·42	·27	·07
	R	—	·52	·62	·49	·21
	N	—	—	·13	·27	·03
O	OP	—	—	·22	·37	·28
	R	—	—	·57	·52	·25
	N	—	—	—	·32	·05
S	OP	—	—	—	·39	—·06
	R	—	—	—	·65	·20
	N	—	—	—	—	·17
D	OP	—	—	—	—	·21
	R	—	—	—	—	·36

probably mixed group whose common element is delinquency. We should not, therefore, assume a similar pattern of inter-correlations, although the general principle still holds that for maximum differentiation of syndromes we need low inter-correlations. To the extent that the latter do not occur, our population presumably does not divide according to the—fairly classic—symptomatologies concerned. Nevertheless, it could be argued that the symptom groups, so far as they do occur in our population, might still be pointed up by the scale and so usefully suggest indications for clinical probing.

It is instructive in this context to study the inter-correlations for our population alongside those given by Crown and Crisp for their two samples. Their data are quoted in Table IV together with our own. In the table the three samples are identified line by line: N for Crown and Crisp's Normal Control Group, OP for their Out-Patient Group, and R for our Remand Group. The numbers of cases for these groups are 109, 62, and 200 respectively throughout.

Factorial analysis of the coefficients for our remand sample is not pursued here, for the reason that it is of no particular clinical interest. However, it is interesting to examine the three samples and to make certain comparisons.

Scrutiny of Table IV reveals two features. First, there is a singular uniformity throughout that coefficients are lowest for the N sample and highest for the R sample. (Indeed, apart from very minor variations that could clearly be ascribed to sampling variations, there is only a single exception to this general feature of the table, viz.: the cell giving the correlations between the A and H sub-scales.*) This general feature is reflected in the average coefficients for the samples, as follows: N, ·23; OP, ·33; R, ·49. Presumably out-patients manifest greater general neuroticism than normals, and at first sight it appears that the remand sample shows even greater. However, it could be put in simpler terms than this: that out-patients, and delinquents even more, have the kind of sensitivity or self-centredness that makes them more aware of, or makes them over-stress to themselves, the significance of nervous symptoms of any kind; or that given an awareness of some symptoms, they tend to generalize it over the range of their conscious experience.

Second, the general pattern of coefficients for each of the samples can be compared. If, for

* It will be argued later that the H sub-scale is qualitatively different from the remainder, and gives in some respects anomalous results.

each sample, we rank the coefficients for size and correlate the resulting rankings, we get the results shown in Table V.

TABLE V

Rank-Order Correlations of the Coefficients given in Table IV

	OP	R
N	·63	·79
OP	—	·55

It appears that the pattern of inter-correlations of the sub-scales for our remand sample is quite closely similar to that for the normal control sample and appreciably less like that of the out-patients. It seems reasonable to assume from this that the general pattern of syndromes for the delinquent (remand) sample is nearer to that of the normals than it is to that of the psycho-neurotic group. Although the remands show a rather greater participation in whatever is the general factor measured than do either neurotics or normals, they do not on average have greater neurotic characteristics: their mean sub-scale scores fall between those for out-patients and normals, as may be seen from the sub-scale statistics given in Table VI.

VALIDATION IN THE REMAND SETTING

Criterion Categories

In attempting to assess the usefulness of M.H.Q. in psychiatric diagnosis in remand work we must look first for our criterion of its usefulness at the clinical conclusions reached about patients. However, since we are dealing with a population that is not necessarily like one of hospital patients and has a common characteristic different from them, we cannot expect psychiatric conclusions about it neces-

sarily to fall into the more familiar pattern of psychiatric syndromes. Our approach to criterion groups was therefore essentially pragmatic, deriving them solely from the written reports as raw material without regard to considerations of syndromes in systematic psychiatric theory or systems of psychopathology.

Ten doctors contributed reports included in this series. Naturally they differ in styles, and include varying amounts of background and supportive matter in addition to specific diagnostic comment. To achieve as objective and factually real a grouping of the 200 cases as possible, all reports were carefully scrutinized twice, noting all diagnostic references. The present writer read all reports and made a provisional grouping; then four psychologist colleagues each read 50 reports and made similar notes independently. The grouping into categories was based on these combined scrutinies, and was discussed with the Senior Medical Officer before finalization. In this procedure there was, of course, no reference made to the M.H.Q. Scale, so that the groupings and the scale results are wholly independent.

The resulting criterion categories were as shown in Table VII, which also gives the breakdown of cases. The names given to the categories are not meant to imply anything very dogmatic or rigid, but are intended merely as shorthand labels for convenient reference. They do, nevertheless, reasonably approximate to the nature of the cases subsumed, as may be seen from the descriptive indications. The categories are reasonably distinct operational clinical groups, at least so far as our experimental sample is concerned, and certainly recognizable categories in remand and general penal work. One obvious distinction from the hospital cases

TABLE VI

Basic Sub-Scale Statistics

	A		P		O		S		D		H	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
N	5·1	3·1	2·9	2·2	5·8	3·1	3·2	2·4	3·3	2·3	7·5	3·1
OP	8·4	4·4	5·2	3·6	8·5	3·0	7·3	3·3	6·3	3·5	5·1	3·7
R	6·7	4·4	4·6	3·0	7·1	3·0	5·8	4·1	6·4	3·3	7·0	3·6

TABLE VII

Criterion Categories

Category	Descriptive indications in doctors' reports	No. of cases
1. "Normals"	No symptomatology: no apparent psychiatric abnormality or problem	56
2. "Immatures"	Immature, inadequate personality	20
3. "Neurotics"	Emotional maladjustment; disturbed emotionally; anxiety and tension; anxious, insecure neurotic; inferiority complex; suffers headaches or migraine	52
4. "Depressives"	Tense, unstable, suicidal; depressed; moody and depressed; suicidal	9
5. "Psychopaths"	Psychopathic disorder; psychopathic traits; personality disorder; violent episodes perhaps with abnormal EEG; sex and violence phantasies; aggressive; sex offences history and abnormal EEG; amoral; some character disorder	21
6. "Drug takers"	Drug taker but no apparent psychiatric abnormality (usually "soft" drugs)	28
6x. "Drug addicts"	Serious drug taker, dependent; addicted	7
7. "Organic"	Some physical symptoms now or historically; asthma; duodenal ulcer; fits; epilepsy; brain injury sequelae	5
8. "Schizophrenics"	Schizophrenic indications	2

and the sub-scales of the M.H.Q. is that all the psychoneurotic groups are probably subsumed under our "neurotics" category.

Differentiation of "Normals" and Others

The immediately interesting feature of Table VII is that we are supplied with a means of validation within the total sample by the provision of a "normal" category against which to contrast the remainder. "Normals" constitute the largest single category and include 28 per cent. of the sample, being therefore reasonably sizeable statistically. Table VIII gives the basic M.H.Q. statistics for each

TABLE VIII

M.H.Q. Total Scores by Criterion Category

					Criterion category					
		1	2	3	4	5	6	6x	7	8	2–8
Mean	..	29·3	37·1	43·0	55·2	39·3	35·6	38·7	46·0	57·0	41·3
S.D.	..	11·78	16·58	15·86	10·49	19·41	14·34	20·10	8·32	2·00	16·69
N	..	56	20	52	9	21	28	7	5	2	144

TABLE IX

M.H.Q. Sub-Scales, "Normals" v. Remainder

M.H.Q. sub-scale		"Normals" v. Remainder			
		Mean difference	S.E. difference	Critical ratio	p less than
A	..	3·9	·8878	4·393	·0001
P	..	0·9	·7871	1·143	·26
O	..	0·9	·7782	1·156	·25
S	..	2·4	·8861	2·709	·01
D	..	2·1	·7790	2·696	·01
H	..	2·3	·8404	2·735	·01

criterion category, together with those for categories 2 to 8 inclusive for comparison with category 1.

It is evident from these figures that the difference between "normals" and the remainder is highly significant (in fact $p < ·000,000,1$). The nearest category to "normals" is category 6 ("drug takers"); even here the difference is significant ($p < ·05$).

The basic statistics of the sub-scales for each criterion category were examined with regard to the differences between "normals" and the remaining categories. The statistical data for these comparisons are given in Table IX.

It may be seen that four out of the six sub-scales contribute significantly to the difference between "normals" and the remaining categories. All six differences are in the same direction ("normals" lower than remainder).

The general conclusion from Tables VIII and IX is that "normals" tend to differentiate themselves from others, in the remand sample, by being lower scorers on M.H.Q., and that this tends to be true of the separate sub-scales or indicators of symptom-clusters as well as of the combined result of these. Broadly this finding

agrees with the data on normals and hospital patients published by Crown and Crisp. This is perhaps best shown graphically, and Fig. 1 shows the average profiles for both "normal" groups, our "remainder" and the hospital out-patients. The order of the sub-scales has been rearranged, so as to clarify the distinctions, by taking them in descending order of average scores for the hospital out-patients group.

It may be seen that, broadly, the four graphs fall into pairs, the two "normal" groups going together, and the "non-normal" remands and the hospital out-patients being similar. The somewhat discrepant behaviour of the H sub-scale will be considered later.

DISCUSSION

Criterion Category Profiles

Granted that M.H.Q. helps to differentiate "normals" from others, how far can it contribute also to the task of identifying different types of non-normal cases in remand work? Clearly this will not be as straightforward as differentiating syndromes in a predominantly psychoneurotic group; but tentative profiles for each of our non-normal categories suggest
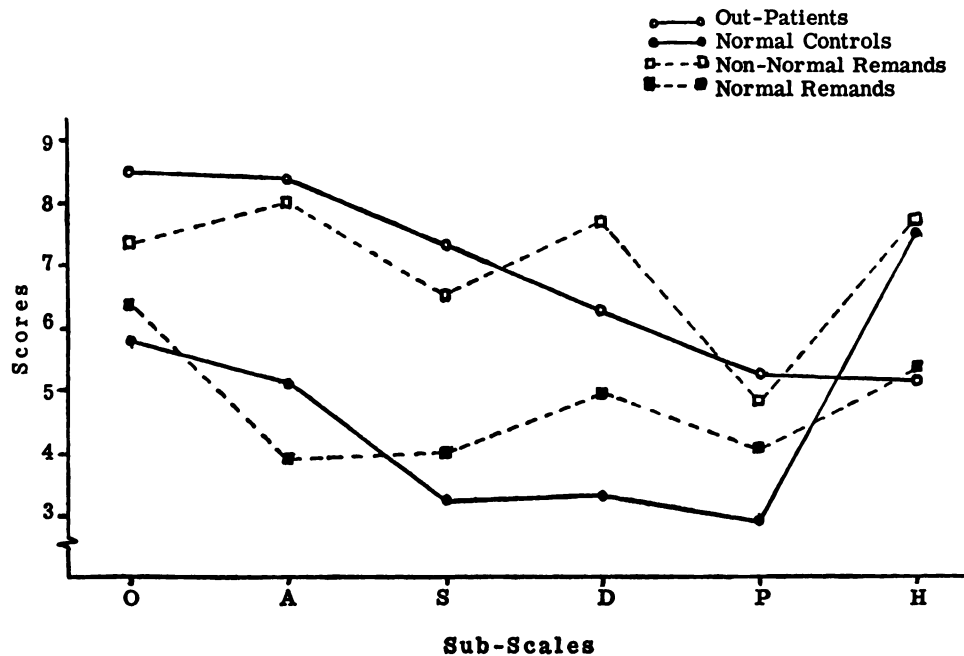
FIG. 1.—Average profiles for various groups.

that, on the whole, all non-normal groups differ from the normals in scoring higher on all sub-scales of M.H.Q. The only actual exceptions to this are the "drug-takers" and "addicts" groups on the phobic sub-scale and the former group on the obsessional sub-scale. There are some noticeable differences in the profiles for different criterion groups. It would be difficult to state these very accurately in words and by reference to the contributions of different sub-scales, but there are possible useful indications in at least some, i.e. the particular contribution of certain sub-scales to certain criterion groups. It is here, of course, that one has to move from quantitative statement to something nearer to qualitative differences, based on a number of clues and their inter-relations rather than single clues or their mathematical combination. This is the hurdle that anyone involved in clinical work has to take. At this juncture our criterion samples are too small to yield stable profiles. One fact that does become evident is the inability of the

phobic sub-scale to differentiate criterion groups and the relative inability of the obsessional sub-scale similarly. Scores on the former particularly are low for all our sub-samples, and these facts are very much in accord with general experience in penal work that neurotic symptoms of the obsessional and—particularly —the phobic kind are relatively rare in the delinquent population.

The Hysteric Sub-Scale

In Table IV we saw that the correlation between anxiety and hysteria constituted an exception to the general run of the coefficients shown. It was unexpectedly low for the remand sample. If the questionnaire is referred to (1) it may be seen that the items that make up the hysteric sub-scale could be challenged as indications of hysteria at least in any pathological sense. It would probably be more accurate to regard them as assessing extraversion as a normal personality trait. One could then easily understand the fact that

Crown and Crisp's normal subjects score much more highly (see Fig. 1) than the (presumably largely introverted) out-patients. Our remand "normals" are closely similar to the out-patients, and our remand "non-normals" closely similar to Crown and Crisp's normal subjects. It may be that this sub-scale is in some way specifically related to delinquency (the common characteristic of all the remand cases), so as to lead to this curious result.

Anxiety and Depression

The high correlation between the anxiety and depression sub-scales also merits some discussion. Anxiety and depression as subjective states are difficult to distinguish in the clinical situation, most clinicians would probably agree. With a technical aid like the M.H.Q. one therefore hopes for a good differentiation; and it is accordingly disappointing that these two sub-scales should produce virtually the highest correlations of all. Why should this be so?

It is not uncommon to find patients describing themselves as "anxious" or "worried" or "depressed" using these terms interchangeably; that is, they are unable to distinguish between them. Similarly, if one pays attention only to what patients say, the confusion may remain. Now, in a perhaps slightly disguised form, the M.H.Q. is only asking the patient the same questions as he may ask himself or as the clinician might ask him. It is consequently not surprising if the same confusion is reflected in the scale results, because again the matter is expressed in verbal form. If the patient cannot make his state clear verbally to himself or to the clinician, it may be expected that he will also find it difficult to distinguish amid the questionnaire language. Probably, therefore, the high correlation between anxiety and depression sub-scales is inevitable, and we must look to other cues—notably demeanour, emotional tone in speech, near-subliminal facial expression changes, and so on (i.e. non-verbal cues)—to indicate the differences.

Accordingly, and particularly with our types of criterion category, it may be safer to rely on profiles initially, when they are available in sufficiently stable form, to be linked subsequently with clinical face-to-face clues.

CONCLUSIONS

We began with the question whether a diagnostic instrument like M.H.Q. could be a useful aid in the psychiatric consideration of remand cases. The available evidence from earlier work indicates that it usefully distinguishes neurotics from normals and differentiates among neurotics according to syndromes.

The present study has shown that the pattern of symptoms in the remand sample is in many respects different from that of a hospital out-patient (predominantly psychoneurotic) sample, and more like a normal sample at least as far as *neurotic* symptoms go. Operationally, our categories are different. However, within our remand sample we have been able to differentiate clinically between normals and "non-normals", and at the same time to show that the M.H.Q. similarly differentiates, as it does with non-delinquent groups. This suggests an initial potentially useful application in a busy department.

Secondly, tentative profiles (not reported here because not yet sufficiently established) suggest that there are some useful differences indicated by M.H.Q. between some at least of our operational "non-normal" categories which could aid in the initial approach to the diagnostic problem. Some symptoms are more relevant to some categories than others. Much more extensive sampling being at present conducted indicates interesting differences, for example, between "drug takers" and "drug addicts", and certain other affinities between these groups and others. It is hoped to report in detail on these matters at a future date.

A further consideration is that in work of this kind the clinician is not merely concerned to "type" each individual; there must be some kind of ensuing decision for action in the individual's regard. The kinds of decision that have to be made are at least dual—one in relation to the remand situation and the penal action that may be most appropriate, the other in relation more specifically to symptomatology and the allied question of the practicability or possibility of treatment. These do not necessarily march together, even though they may interact. One may, in the particular case, over-ride the other; one (penal sanction) may be necessary, or

inevitable for extraneous reasons (social policy), one (therapy) may be impossible for psychological reasons (lack of insight).

Diagnosis thus involves the consideration of the penal situation, the symptom situation, and also the question of what actions to recommend and to take. In this setting both operational categories and syndromes are relevant, and an aid which contributes to either or both can presumably be useful. With regard to symptoms, Crown and Crisp showed the instrument's relevance; we have been able to indicate some relevance to the other aspect as well.

Summary

The application of a self-rating scale concerned with psychiatric syndromes to a sample of under-21 males remanded for psychiatric reports has been described. Independent of age and intelligence within the range of this sample, it has been shown to distinguish between the "normal" and the "non-normal" parts of the remand population. The breakdown of this population into distinct and recognizable categories of cases is given, and there are suggestive indications that the scale may afford distinctive profiles for at least some of these categories.

Certain aspects of some of the sub-scales were discussed, and continued application of the scale is expected to throw some instructive light on some distinctions between and affinities among certain groups of cases, notably those involved in drug taking. Further work is in hand on these groups.

Reference

Crown, S., and Crisp, A. H. (1966). "A short clinical diagnostic self-rating scale for psychoneurotic patients." *Brit. J. Psychiat.*, 112, 917–923.

R. Cockett, B.A., Ph.D., F.B.Ps.S., *Principal Psychologist, H.M. Remand Centre, Ashford, Middlesex*