British Journal of Psychiatry (1990), **157**, 671–674

The Assessment of Psychiatric Disability in the Community
A Comparison of Clinical, Staff, and Family Interviews

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Assessments of some of the symptoms and behaviour problems of long-term psychiatric patients living in the community were obtained independently from clinical interviews with such patients, and from interviews with day staff, residential staff and families caring for them. In general, interviews with residential staff and family members revealed much higher levels of symptoms and behaviour problems than either of the other two interviews. These findings have implications for research and clinical practice including the fact that adequate assessments should include the testimony of family or residential staff.

The increasing emphasis on care in multiple settings, whether in a combination of day and residential environments or because movement between settings occurs as needs change over time, has prompted questions as to whether methods of assessment that were satisfactory for long-term hospital care remain so in the new circumstances. Previously, ratings of negative symptoms based on a brief office interview were highly concordant with ratings of ward behaviour made by nurses following observation over a week (Wing, 1960, 1961*a*). Moreover, ratings of the ward behaviour made years apart remained highly correlated.

Such methods have been adapted for use in the community; for example, a series of social behaviour schedules (SBS) and social role performance schedules (SRPS) has been developed by the Medical Research Council (MRC) Social Psychiatry Unit for use in a variety of day and residential settings (Wing, 1989). There is evidence, however, that ratings can vary systematically according to the rater's expectations and experience (Wing, 1961*b*). If expectations also vary between respondents in different settings, they might differentially affect thresholds for reporting the evidence on which ratings are based. In addition, symptoms and behaviours may change as an individual moves from one setting to another, even on the same day. These changes may be spontaneous, or may reflect the fact that patients are under differing obligations and restrictions in different settings. Other factors that may influence rating are the amount of time raters have available to observe symptoms and behaviour, and the amount of disclosure about mental states that is made to or sought by raters.

Wing & Gould (1978) found that the parents of mentally handicapped and autistic children reported both more behavioural problems and more skills than did professional staff. The children spent more time in their own homes, received more individual attention there and tended to be more active than in the school, the nursery or any other day setting. Holmes *et al* (1982) confirmed the importance of setting even within a large mental hospital. Ratings made in the day training unit indicated fewer behaviour problems and higher skills than were recorded by ward nurses. The latter often did not know whether a resident could read or count or undertake various tasks. However, residents spent relatively little time in the training centres and nurses had more opportunity to observe disturbed behaviour in the less structured environment of the ward.

The effect of observation period is also evident in the lower reliability of ratings of behaviour based on a clinical interview using the Present State Examination (PSE) compared with those based on subjective experiences described by the person interviewed (Wing *et al*, 1974). The interview lasts about an hour and the examiner's rating of behaviour is based on this time only. The period described by the interviewee, however, is the past month.

There is a clear danger, therefore, that assessments made in out-patient clinics, day units or staff offices might not be a sufficient guide to the existence of real problems. This may particularly be true of differences between day and residential settings; the latter, of course, including the patient's own home. Several studies have recently documented the important role played by relatives caring for people with long-term psychiatric disabilities, and have noted their high level of objective burden and their low levels of contact with psychiatric services (Byrne *et al*, 1974; Creer & Wing, 1974; Creer *et al*, 1982; Gibbons *et al*, 1984; MacCarthy *et al*, 1989*b*).

This report is based on data from the Camberwell High Contact Survey (CHCS: Brewin *et al*, 1988; Brugha *et al*, 1988), which examined the needs of psychiatric patients in regular long-term contact with day-care facilities. For each patient in the study, different members of the research team conducted a clinical interview with the patient, an interview with day-care staff covering symptoms and behaviour during the previous month, and an interview with a relative or residential staff member where this was feasible. This design not only offered the opportunity of comparing the ratings made in office, day-care and residential settings, but estimates of symptoms and behaviour in a residential setting made by relatives could additionally be compared with estimates made by experienced residential staff.

Method

Full details of sampling and methodology are available in a previous report (Brugha *et al*, 1988). Briefly, the sample consisted of 145 patients aged 18 years or over who were ordinarily resident in South Southwark and who had been regularly attending a psychiatric day hospital or day centre for at least one year. In-patients, patients with severe mental retardation, patients addicted to substances other than alcohol, and patients over 65 years of age suffering from dementia were excluded. Approximately half the sample had received a hospital diagnosis of schizophrenia or paranoid psychosis. The median number of years since first contact with psychiatric services was 17 years for men and 14 years for women. The sample comprised 55% men and 45% women, and the average age was 50 years.

Each patient was interviewed using an early version of the 10th edition of the PSE by a research psychiatrist, who also administered other schedules for rating attitudes and social contacts. A detailed description of PSE10 is reported elsewhere (Wing *et al*, 1990). Interviews with day staff, and either with families or residential staff as appropriate, were conducted independently by a clinical psychologist or sociologist. Data were obtained from relatives for 53 patients and from residential staff for a further 25 patients. The interviews with family and staff members included the administration of a short version of the MRC Social Behaviour Schedule (SBS; Wykes & Sturt, 1986), a widely used measure of symptoms and behaviour problems. The particular items and scoring used are described elsewhere (Brewin & Wing, 1988).

The PSE10 and the SBS have a number of items with very similar content, although not all items are rated in identical ways in the two instruments. By collapsing across rating categories we derived four measures that could be scored in exactly the same way. These four measures were: (a) Retardation (two items: slowness, underactivity), maximum score = 4; (b) Neurotic symptoms (four items: depression, suicidal thoughts or acts, anxiety, obsessional behaviour), maximum score = 8; (c) Social interaction (three items: non-verbal behaviour, social mixing, initiation of conversation), maximum score = 6; (d) Behaviour problems (five items: overactivity, elation, odd gestures and mannerisms, acting out delusions and hallucinations, aggressive behaviour), maximum score = 10. These items represent only a small fraction of the total information recorded but they do allow limited comparisons to be made.

Interviewers underwent prior training on the SBS to ensure reliability of ratings between settings. As an additional check, 10 family interviews were tape-recorded and re-rated by another of the participating interviewers. Agreement between the interviewers on the above four measures was high (smallest $r = 0.97$). There was no evidence for any systematic differences in the levels of symptoms rated (largest $t = 1.5$, $P > 0.10$). Reliability on PSE10 scores was also high.

Results

As the data were all negatively skewed, non-parametric statistics are used throughout. First, scores obtained from family and residential staff members on the four measures were compared using a Mann–Whitney *U*-test to see whether there were any between-group differences in the reporting of symptoms and behaviour problems. There were no significant differences in the reporting of retardation ($\bar{X}$ = 1.08 v. 1.26), social interaction difficulties ($\bar{X}$ = 2.62 v. 2.10), or behaviour problems ($\bar{X}$ = 1.52 v. 1.59). However, family members reported more neurotic problems than did residential staff ($\bar{X}$ = 1.14 v. 0.62, $z = 2.11$, $P < 0.05$). In view of the predominantly non-significant differences, data supplied by family and residential staff members are treated as belonging to a single group in most of the following analyses.

TABLE I

Mean ratings of symptoms and behaviour problems by clinical interview, interview with day staff, and interview with family/residential staff

Symptom/behaviour problem	*Mean rating*[1]			χ^2	P<
	Clinician	*Day staff*	*Residential staff/family*		
Retardation	0.15a	0.43b	1.13c	14.59	0.001
Social interaction	0.78a	1.31b	2.46c	11.31	0.01
Neurotic problems	0.75a	0.48b	0.99a	6.12	0.05
Behavioural problems	0.73a	0.65a	1.54b	11.35	0.01

1. Different letters (a, b, c) in the rows indicate significantly different scores ($P < 0.01$) (e.g. the three ratings of retardation were all significantly different while the clinicians' ratings of neurotic problems were only significantly different to those of the day staff).

TABLE II

Agreement between clinical interviews, interviews with day staff, and interviews with family/residential staff (table shows percentage agreement and weighted kappa averaged across individual items)

	Clinician/ day staff (n = *114*) %	k	*Clinician/ residential* (n = *43*) %	k	*Day staff/ residential* (n = *43*) %	k
Retardation (2 items)	84	0.18	63	0.07	59	0.16
Social interaction (3 items)	65	0.15	45	0.00	51	0.16
Neurotic problems (4 items)	85	0.25	79	0.13	79	0.16
Behavioural problems (5 items)	84	0.30	78	0.21	77	0.21

We next carried out within-subject analyses to compare scores on the four measures obtained from the clinical interview, the interview with day staff, and the interview with family/residential staff. Mean scores from these three interviews are shown in Table I.

Overall differences between the three sets of interview data were tested using four Friedman non-parametric analyses of variance, which yielded the χ^2 values shown in the penultimate column of Table I. The difference between individual pairs of scores was investigated with Wilcoxon tests. Table I indicates that interviews with family/residential staff produced significantly more reports of slowness and underactivity, impaired social interaction, and behavioural problems than did either of the other interviews. Family/residential staff interviews also provided more evidence of neurotic problems than did interviews with day staff. Separate analyses of variance comparing scores on neurotic symptoms from the clinical interview, day staff and residential staff, and from the clinical interview, day staff and family member, indicated that this effect was a function of family interviews ($\chi^2 = 6.19$, $P < 0.05$), not of residential staff interviews ($\chi^2 = 1.44$, $P > 0.10$).

In addition, Table I shows that interviews with day staff yielded significantly more evidence of slowness and underactivity, and impaired social interaction, than did the clinical interview. In contrast, clinical interviews led to the identification of significantly more neurotic symptoms than did interviews with day-care staff.

Level of agreement between the three sets of interview data was next investigated using both a percentage agreement and the weighted kappa statistic, which corrects for the amount of agreement to be expected by chance. Table I shows these data, averaged across individual items, for each of the four subscales. Bearing in mind that the distribution on all items was quite heavily skewed, levels of agreement were poor. Agreement on the items measuring neurotic and behavioural problems was generally greater than agreement on those measuring retardation and social interaction. As would be expected from our other results, agreement between the clinical interview and the day-staff interview was almost invariably higher than between the residential interview and either of the other two interviews.

Discussion

The results show that estimates of some symptoms and behavioural problems are highest when they are made by those who can observe the patient in a residential setting. This might be because raters in residential settings have higher expectations of patients and over-report symptoms and behaviour problems. However, this seems unlikely since the same patterns of observations are made by experienced residential staff and by family members. Rather, it is probable that the discrepancy between day and residential settings is due either to greater opportunities for observation, or to genuine differences in the behaviour shown in the two settings, or to both. The implication is that adequate assessments must include the testimony of family or residential staff if the degree of these problem behaviours is not to be seriously underestimated.

Whereas interviews with day staff invariably produced lower estimates of problem behaviours than did residential interviews, clinical interviews gave lower estimates of retardation and social interaction deficits than did either of the other assessments, probably owing to the reduced opportunities for observation. Estimates of behaviour problems were also lower in clinical interviews than in residential interviews, and thus it is suggested that PSE10 should be supplemented by a schedule such as the brief SBS when rating patients with long-term disablement. The estimate of neurotic problems given by the clinical interview, however, was equivalent to that provided by the residential respondents, and significantly greater than that provided in the day setting. We may speculate that patients disclosed their mental states both to their families and in response to the clinical interview, but were not routinely called upon to make such disclosures by day staff.

A related cause for concern was the low agreement between the different assessments, which is not altogether surprising given the discrepancies in the levels of symptom reporting. Reliability between day and residential settings was substantially poorer than equivalent figures given for a different version of the SBS by Wykes & Sturt (1986), but this may be because our assessments were conducted by independent interviewers whereas Wykes & Sturt employed the same interviewer in both settings. A partial solution to the problem of low reliability may be to supplement staff interviews with more extensive questioning of patients themselves, since there is evidence that patients with long-term psychiatric disabilities can be reliable informants on some topics if questioned appropriately (MacCarthy *et al*, 1986). Another implication of our findings is that there should be more intensive interaction between day staff and patients' families and hostel staff. A suitable forum for relatives may be a counselling group, and one such group has been shown to be both low in cost and clinically effective (Kuipers *et al*, 1989; MacCarthy *et al*, 1989*a*).

We believe our findings have considerable significance both for clinicians and researchers. Community care workers who look after chronically disabled patients need to know the limits of the assessments made during restricted periods of observation in an office or day centre. Researchers investigating the impact of different treatments, or of different forms of community care, also need to consider how they should measure clinical outcomes if they are to obtain more complete estimates of symptoms and problem behaviours.

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