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Community Psychiatric Nursing for Neurotic Patients: A Controlled Trial

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Summary: Seventy-one neurotic patients requiring follow-up were randomly assigned to routine psychiatric out-patient care or to supportive home visiting from community psychiatric nurses as their main treatment agents and were assessed every six months for 18 months. No differences were found between effectiveness of the two modes of service on symptoms, social adjustment or family burden. Patients seeing community psychiatric nurses reported greater satisfaction with treatment. Community psychiatric nursing resulted in a marked reduction in out-patient contacts with psychiatrists and other staff, more discharges, and a small increase in general practitioner contact for prescribing. Care of such patients by community psychiatric nurses is a valuable alternative mode of deployment within the psychiatric team.

Community psychiatric nursing has undergone great expansion in this country in the last ten years (Parnell, 1977). There have been few evaluative studies. Hunter (1978) reported a follow-up study of schizophrenics treated by community psychiatric nurses, retrospectively matched with patients not referred to the service. Contrary to expectation the community psychiatric nursing group spent more time in hospital and in day care, and had more out-patient attendances. In a similar retrospective controlled comparison of a mixed patient group in New Zealand (Robinson, 1972) there was a reduction in readmission in the first eight weeks, but not over 12 months.

Neither of these studies reported other outcome measures, such as symptoms and social function. Retrospective matching is difficult to achieve, particularly as patients thought to be at risk of relapse are more likely to be referred to the service. The prospective randomized controlled clinical trial is a much preferable research design, and has been applied to evaluation of services.

A group of patients throwing an increasing burden on psychiatric services are chronic neurotics. They comprise a high proportion of out-patients (Gillies and Egert, 1973). Depressives ranked second among diagnostic groups receiving care by community psychiatric nurses in a survey (Parnell, 1977). We report a prospective randomized controlled comparison of community psychiatric nursing and out-patient attendances in follow-up care of neurotic patients. Multiple outcome criteria included symptoms, social function, family burden, consumer satisfaction and the effects on actual treatment received. Economic costs were also measured and will be reported separately (Mangen *et al*, in press).

Methods

Service studied

The nursing service was based at Springfield Hospital, London SW17, a psychiatric hospital serving local catchment areas of 350,000. Out-patient clinics were held at St George's Hospital, Tooting and St James's Hospital, Balham with smaller clinics at two other hospitals. In-patient beds and a day hospital were at Springfield, with a small number of admissions to two other hospitals. The community psychiatric nursing service had commenced four years before. Eight full-time RMN psychiatric nurses were involved in the study. They worked in close co-ordination with the 10 catchment area teams, in most cases working exclusively with one team.

Subjects

The sample comprised patients aged 18–69, either (i) being discharged from hospital or day hospital, or (ii) current out-patients who had already attended six months (to exclude those primarily receiving short-term treatment). Subjects had to receive a research team ICD diagnosis (OPCS, 1968) within categories of neuroses (300), unipolar affective psychoses (298) or personality disorders of certain types: affective (301.1), anankastic (301.4), hysterical (301.5), asthenic (301.6). Excluded were patients with other diagnoses including bipolar affective psychoses, other person-

ality disorders, alcoholism, drug dependence, or mental handicap. All subjects had also to be considered by the treating team to require at least six months further follow-up care.

Sample selection and study procedures

All out-patient attenders and impending hospital/day hospital discharges were screened. After initial assessment, suitable subjects were randomized to one of the two treatment groups using the minimization procedure described by Taves (1974), which allowed approximate matching on 14 demographic, diagnostic, history and current rating variables. Treatment was continued for up to 18 months. Patients who failed to complete six months treatment were dropped from the study to ensure genuinely contrasted treatment groups. Those discharged from treatment thereafter remained in the study and were assessed regularly. Patients who required in-patient or day patient treatment remained in the study, returning to the original treatment group on discharge.

Community psychiatric nursing (CPN) care

The two study treatments were specified with a minimum number of constraints to allow them to correspond to ordinary conditions. It was accepted that individual clinical teams might differ in practice. Patients assigned to community psychiatric nursing care were expected to have the nurse as the main agent. Frequency of contacts and their precise nature were as clinically indicated. Patients remained under the care of the psychiatric team. The nurse could consult a psychiatrist as required for guidance and supervision, but patients saw psychiatrists as little as possible. Prescribing was by general practitioners. Nurses recorded full details of each contact and its content on a special checklist, findings from which will be reported in a separate paper. Nurses saw their patients mainly at home (78 per cent of contacts), but could do so at the psychiatric out-patient departments or at special evening clinics which several maintained on health clinic premises. Contacts were most commonly with the patient alone (59 per cent) or together with a relative (26 per cent) and particularly involved supportive psychotherapy, including encouragement of self-examination of patient's behaviour, with supervision of medication and occasional use of other regimes such as behaviour therapy, marital or family therapy.

Psychiatric out-patient (OP) care

Out-patients were expected to receive the usual follow-up care as required, from consultants or junior medical staff. Community psychiatric nursing was not permitted, and if injectable medications were required they were given by the separate out-patient nurses. Contact with other staff such as psychologists, social workers, was not limited in either treatment condition.

Assessments

Assessments were principally by the research sociologist and psychologist not involved in treatment. These took place initially and at six-month intervals to 18 months. An initial symptom, history and diagnostic assessment was also made by a psychiatrist. The main repeated assessments were:

(a) Symptom assessments were made on the Clinical Interview for Depression (Paykel *et al*, 1970), a semistructured interview covering 28 ratings of neurotic symptoms. In addition ratings were made on the Raskin Three Area Depression Scale (Raskin *et al*, 1970), a similar Three Area Anxiety Scale (Covi *et al*, unpublished), global ratings of present illness, change, and retrospective global ratings of each month of the six-month period.

(b) Social adjustment was assessed at interview with the patient, using the Social Adjustment Scale (Weissman and Paykel, 1974), with 51 items covering role areas of work, social and leisure activities, relationship with extended family, marital relationship and parenthood.

(c) Information was obtained from a relative residing with the patient, on a schedule modified from the work of Grad and Sainsbury (1968) and Hirsch *et al* (1979). Ratings were made of informant's assessment of patient's symptoms (14 items) and social performance (30 items). Two aspects of family burden were distinguished: objective burden (24 items), concerned with actual effect on the family's activities and living patterns and work record; subjective burden (21 items) measuring feelings of worry and stress experienced by informant.

(d) Details were obtained from the patients of all contacts with psychiatrists, other psychiatric personnel, general practitioners, general out-patient clinics and hospitals, social and voluntary agencies, and all medication received.

(e) Satisfaction with treatment was assessed at each interview with patient and relative on a number of specific and global aspects. In addition at the end of the 18 months the patient completed a self-report questionnaire for consumer satisfaction (Catalan *et al*, 1980).

A reliability study between the two raters, on the interview symptom ratings and the Social Adjustment Scale, showed mean correlations of 0.82 and 0.85 respectively.

Patient flow and drop-out

A total of 99 patients were included in the main study sample. An additional 11 subjects in each treatment group were randomized but failed to qualify in that they did not complete the first six months treatment in the study design (12 due to early discharge or move away, 3 to refusal or poor co-operation in assessments, 1 assignment of an out-patient to a nurse and 6 failures to assign a nurse to CPN patients by treating teams, 1 patient refusal to see a CPN).

Among the 99 patients qualifying, 71 completed a full 18 months, 36 in community psychiatric nursing and 35 in out-patient care. Of the 28 study terminations between six and 18 months, five were due to moving away, 14 to poor co-operation, one to return of a nursing patient to OP care. A deliberate decision was made not to assess the last eight patients included in the study beyond 12 months so as not to delay study completion. There were no significant differences between the two groups regarding early terminations or their causes. Findings reported here are on the 71 completers, but analyses using all 99 subjects gave virtually identical results.

Results

Characteristics of sample

Table I shows characteristics of the two groups on selected clinical, history and social variables. The groups were closely matched, without significant differences. Overall subjects were middle-aged and predominantly female. About half had a primary diagnosis of depression. Symptom ratings for the most recent illness, not given in the table, showed the most prominent symptoms, equal in extent, were depression and anxiety. Two-thirds of the sample were derived from out-patients rather than discharges from hospital or day hospital. Histories of previous illness and treatment were often lengthy, with mean recent illness of three years, two years of recent treatment, and more than three years psychiatric treatment over life time, mostly as out-patients.

Effectiveness on symptoms and social adjustment

Mean scores at each rating period were examined on individual variables and derived scores from symptom ratings and the social adjustment scale. Change scores from initial level were also calculated. Significance of differences was tested by t-test. Table II shows mean initial scores and change scores over 18 months. Fig 1 illustrates mean scores over time on two representative 1–7 global ratings, for severity of symptoms and overall social adjustment.

Initial symptom levels were relatively low, reflecting the large proportion of long-term out-patient attenders without recent exacerbation. The mean rating of about 3 on the global illness scale corresponded to mild illness. There was some improvement over time. Mean change was closely similar in the two groups, without significant differences. On examination of all individual ratings at each time point the findings were similar.

Initial scores on social adjustment were also relatively low, with the mean global rating of about 3 also indicating mild impairment. However, the individual social adjustment ratings were on shorter scales, of 1–5 range, and here means indicated moderate maladjustment, particularly regarding work and social and leisure activities. On change scores improvement occurred, but it was relatively modest. As before there were no significant differences between the two groups at any point.

Attention was also paid to the number of subjects employed in work at each time period. In part reflecting social incapacity and in part the predominantly female sample, only about half the subjects were working, even in part-time work, at each point. There were no differences between groups.

Informant ratings and family burden

Informant ratings were obtained throughout the 18 months on only 32 per cent of the patients. Forty-one

TABLE I

Initial characteristics of treatment groups[1]

	OP (n = 36) %	CPN (n = 35) %
Demographic:		
Age (mean years)	45.2	45.3
Female	64%	74%
Single	14%	14%
Married	56%	66%
Separated/widowed/divorced	31%	20%
Primary diagnosis:		
Depressive neurosis	39%	43%
Anxiety or phobic neurosis	31%	32%
Other neurosis	6%	9%
Depressive psychosis	14%	9%
Personality disorder	11%	8%
Previous history:		
Recent out-patient	67%	71%
Recent in-patient/day patient	33%	29%
Months of present illness (mean)	33.3	30.0
Months of recent continuous treatment (mean)	22.4	25.5
Total months psychiatric treatment over life time (mean)	40.3	36.5

[1] No significant differences at $P < .05$, by χ^2 or t-test.

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TABLE II

Mean initial scores and change scores over 18 months on symptoms and social adjustment[1]

	Range of scale	Mean initial scores[2]		Mean change scores	
		OP (n = 36)	CPN (n = 35)	OP (n = 36)	CPN (n = 35)
Symptom ratings:					
Clinical interview mean of items	1–7	1.93	1.82	0.33	0.30
Global severity of illness	1–7	3.25	3.11	0.72	0.80
Three area depression	3–15	5.86	5.34	0.86	0.89
Three area anxiety	3–15	5.78	5.74	0.67	0.86
Social adjustment role area means:					
Work	1–5	1.93	1.92	0.29	0.13
Social and leisure	1–5	2.17	2.10	0.98	0.14
Extended family	1–5	1.68	1.63	0.26	0.11
Marital	1–5	1.81	2.03	0.11	−0.11
Parental	1–5	1.50	1.57	0.27	−0.05
Overall adjustment (global)	1–7	3.11	2.83	0.44	0.23

[1] No differences reached 5% significance on t-test.
[2] Higher scores indicate greater impairment.

TABLE III

Mean initial scores and change scores over 18 months on informant ratings[1]

	Mean initial scores[2]		Mean change scores	
	OP (n = 9)	CPN (n = 14)	OP (n = 9)	CPN (n = 14)
Informants assessment of patient's symptoms	1.94	1.84	0.33	0.48
Informants assessment of patient's social performance	2.10	2.04	0.25	0.19
Objective family burden	1.23	1.16	0.00	0.01
Subjective family burden	1.51	1.26	0.18	0.06

[1] 1–5 scales: No differences reached 5% significance on t-test.
[2] Higher scores indicate greater impairment.

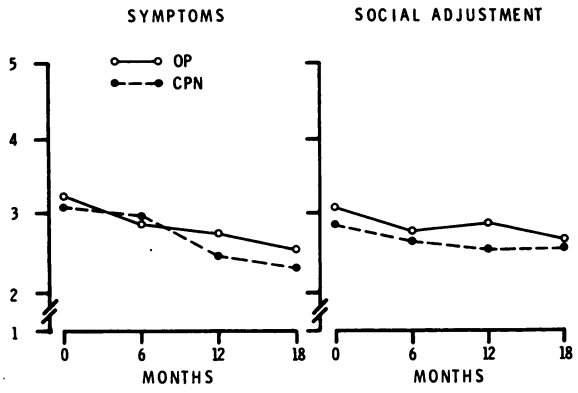

FIG 1.—Mean scores on global ratings of symptoms and social adjustment.

per cent did not have a close relative residing with them, and friends were excluded as less likely to provide accurate information. For an additional 27 per cent, informant co-operation was poor initially or later in the study. Table III shows mean initial and change scores in the two groups on the minority of 23 patients for whom data were available throughout the study. Mean scores were calculated separately for items reflecting informants' assessment of patients' symptoms, patients' social performance, objective burden on the family and subjective burden. Initial ratings showed evidence of symptoms and social maladjustment manifested to the family and these improved over time. However, objectively and subjectively perceived family burden were relatively low and showed little change. There were no significant differences between groups in mean levels or change.

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Satisfaction with treatment

Satisfaction with treatment was assessed at the end of 18 months by the Consumer Satisfaction Schedule (Catalan *et al*, 1980). Patients were asked to rate general satisfaction with treatment and ability to manage their problems, and to rate perception of the main treating agent along 11 dimensions. Data were available on 59 subjects, excluding the earliest completers in the study. Findings are shown in Table IV. There was a general tendency for greater satisfaction to be expressed on all items in the community psychiatric nursing group. Nurses were rated as significantly more easy to talk to, interested, pleasant, relaxing, caring and better at job than psychiatrists. The total satisfaction score showed substantially greater satisfaction in the community psychiatric nursing group.

Satisfaction with treatment was also rated at each assessment interview with the patient and informant. Initially ratings were similar in the two treatment groups. Over time the ratings in the community psychiatric nursing group improved while those in out-patient care showed little change. Differences between the two groups on patient ratings of global satisfaction were significant at 12 and 18 months.

Treatment received

Information was obtained regarding all psychiatric, social work and related treatment and contacts including those with voluntary services. All general practitioner contacts were recorded, with no attempt at distinction between those for psychiatric and non-psychiatric purposes. Non-psychiatric hospital treatment was also recorded, but was relatively low and showed no differences. Prescribing of psychotropic medication was also examined. Overall it was comparable in amount in the two groups.

Table V sets out the main findings regarding psychiatric and related treatment. The amount of in-patient and day patient care was low. There was a tendency for it to be lower in the community psychiatric nursing group, but this was not significant, being attributable to very small numbers of patients.

The CPN group had a mean of one extra contact with general practitioners in the first six months, presumably for prescribing, but the difference was not significant, and there was little difference in subsequent periods. Psychiatric out-patient visits were greatly reduced to an average of half a visit per patient in the first six months, compared to 3.4 in the OP group. This reduction was over-compensated in the first six months by a mean of 5.5 contacts with the community psychiatric nurse. This initial phase was followed by a rapid reduction in nurse contacts in subsequent months. It had been expected that withdrawal of psychiatrists might result in an increase of contacts with other personnel but this was not the case. After the first six months contacts with social workers, psychologists and others were actually

TABLE IV

*Mean scores on consumer satisfaction schedule at 18 months**

	OP (n = 29)	CPN (n = 30)	Significance†
1. General satisfaction	2.78	1.80	NS
2. Ability to manage problems	3.03	2.43	NS
For psychiatrist or CPN			
3. Easy to talk to	2.62	1.73	< .05
4. Interested in me	2.21	1.47	< .05
5. Warm	2.52	2.00	NS
6. Trusting	2.14	1.67	NS
7. Helpful	2.24	1.67	NS
8. Kind	2.10	1.40	< .05
9. Pleasant	2.07	1.33	< .01
10. Relaxing	3.00	1.97	< .05
11. Understanding	2.31	1.70	NS
12. Caring	2.06	1.43	< .01
13. Good at job	1.97	1.23	< .05
Total satisfaction score (mean of items 3–13)	2.30	1.60	< .01

* Range 1–7 with low scores indicating greater satisfaction.

† By t-test.

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TABLE V

Contacts with psychiatric services and general practitioners in each six months

	First six months			Second six months			Third six months		
	OP	CPN	Significance[1]	OP	CPN	Significance[1]	OP	CPN	Significance[1]
1. Psychiatric in-patient/day patient care (mean weeks)	0.11	0.06	NS	0.92	0.17	NS	0.47	0.29	NS
2. No. of GP contacts	3.08	4.00	NS	3.36	3.71	NS	3.31	3.57	NS
3. No. of contacts with psychiatrist	3.36	0.49	< .001	2.54	0.34	< .001	2.03	0.54	< .001
4. No. of CPN contacts	0.00	0.59	< .001	0.00	4.97	< .001	0.00	2.63	< .001
5. No. of contacts with other psychiatric personnel	0.83	1.06	NS	1.93	0.15	NS	2.53	0.34	< .05
All psychiatric contacts (total of 1–5)	4.17	7.03	< .05	4.47	5.43	NS	4.56	3.51	NS

[1] t-test.

higher in the out-patient group. Examining the total amount of care from psychiatric and social services, in the first six months there was a mean of seven contacts in the CPN group and 4.2 in the OP group, a significant increase. This fell off rapidly and in the last six months there were 3.5 contacts in the CPN group and 4.6 in OP, a worthwhile reduction although the difference was not significant.

During the study there were 40 contacts (6.8 per cent of all nurse contacts) between nurses and psychiatrists to discuss patients. These contacts were particularly during the first and second six-month periods, and on two-thirds of occasions were relatively brief telephone discussions. They amounted to an average of 5 contacts with each nurse over 18 months or 0.6 per patient (although several patients might be discussed in a session). There were also a total of 26 contacts by nurses with a GP and seven with other therapists, also mostly brief discussions.

Discharges

The declining rate of contacts with community psychiatric nurses suggested that more discharges occurred in this group. This finding was confirmed when treatment status at the end of the study was examined (Table VI). A total of 72 per cent of the out-patient group were still receiving psychiatric care as opposed to 46 per cent of the CPN group. The discharged patients were mainly still in some form of contact with the general practitioner, but a higher proportion of the CPN group were receiving no treatment.

Discussion

Two-thirds of our patients were chronic out-patients. Such neurotic patients are common in psychiatric out-patient clinics. Often their symptoms are relatively mild although persistent, but they are socially disabled. Treatment may comprise routinized infrequent contact with junior medical staff, who rotate and may never get to know the patient well enough to carry through a treatment plan. We suspected that nurses could provide a more flexible service, better contact with families, and because they were in more stable contact might be better able to prepare for and achieve discharges. There were possible disadvantages: nurses might be less skilled than psychiatrists in psychotherapy, medication supervision or other treatments; financial savings might be negated by frequent nursing visits or shift of the burden to the GP, social workers and other agencies; intensive follow-up might result in admission for minor relapses; patients might be dissatisfied at seeing a nurse rather than a doctor. Multiple measures of outcome were therefore necessary.

The initial characteristics of the sample were consistent with this picture. Symptom levels were relatively mild although the mean levels concealed fluctuations with episodic worsening or more persistent symptoms in some patients. Social maladjustment was more marked. Family burden was relatively low. Partly this was because many of the patients were isolated and did not live with family members who could be burdened. Partly also the symptoms and social disability which the family rated as present lacked the severity or qulaity to be a major burden.

We did not find great differences in outcome between the two modes of follow-up care, but they favoured community psychiatric nursing. On symptoms, social disability and family burden the two groups were closely comparable. There was room for improvement from initial levels on symptoms and social adjustment. Separate testing of initial to final change by paired t-tests (not shown in the tables) confirmed that, although the improvement was modest, it was significant. It cannot be proven from the present study that either form of care was responsible for the improvement or superior to no treatment, but at the

TABLE VI

Treatment status at end of study

	OP		CPN	
	N	%	N	%
Continuing psychiatric care[1]	26	72.2	16	45.7
Discharged and GP care only	2	5.6	9	25.7
Discharged and no treatment	8	22.2	10	28.6

[1] Includes patients in receipt of CPN, out-patient, in-patient or day patient care.
$\chi^2 = 7.05$; $P < .05$.

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very least there was no penalty from use of the alternative mode of care.

A further measure of outcome was consumer satisfaction, expressed directly at interview with the researchers, and by questionnaire. Rather than producing less satisfaction, as seemed possible, community psychiatric nursing produced more. Consumer satisfaction is a limited goal by itself, but it is worthwhile if other aspects are not disadvantageous. The increased satisfaction was not simply the result of more frequent and longer contacts by nurses since satisfaction increased later in the study as contact frequency fell. The full reasons for the satisfaction cannot be clear, but a more detailed examination of ratings of various aspects made at the interview assessments suggests some possibilities. Patients expressed particular satisfaction with the home location of interviews, the amount of information imparted by the nurse, and, in the questionnaire, with aspects of the patient-therapist relationship. CPN patients rated the nurse as the most helpful treating agent but, surprisingly, in only about half the ratings as the main treating agent.

Another aim of the study was to examine the actual treatment received. The introduction of nurses was feasible and it achieved marked reduction in contact with psychiatrists. There was increased contact with general practitioners, but only in the first six months when it amounted to one extra visit. Contacts with others were reduced rather than increased. Nurses saw their patients quite frequently at the start. This may partly have reflected enthusiasm and partly the challenge of changing therapists where patients had often been accustomed for considerable time to seeing psychiatrists. In the long run nurses cut down their visits markedly.

There are, of course, other aspects of contacts which may be more important than their number. Some of these are reported in relation to costs, in a separate paper (Mangen *et al*, in press). General practitioner contacts were very brief (5 minutes); psychiatric contacts relatively brief (about 15 minutes); nursing contacts longer (1 hour). The detailed content of nursing contacts was recorded and will be reported separately. The content of psychiatric contacts was not recorded in detail but it mainly comprised brief support and prescribing, while GP contacts mainly involved the latter. Community psychiatric nursing care cost a little more in the first six months, but was significantly cheaper over the total 18 months.

Nurses also achieved more discharges. The brief nature of the psychiatric interviews and mild symptom levels might raise questions for many of the patients as to the value of treatment and why discharge had not taken place earlier. In fact, often it had been attempted but had been accompanied by a rapid return of symptoms and continuing care. Out-patient attendance appears to convey some benefit. It is tempting to see this in some cases as a transaction in which contact with the clinic is providing a social outlet for an isolated person, but this undervalues the supportive elements which may go with brief contacts.

The longer consistent care from one person, more intensive initial work and preparation for discharge by the nurses probably facilitated their greater success in discharge. This was a worthwhile step, both in terms of the dependency of many of the patients and of the reduced caseload and cost to the services. Many of the discharged patients remained under the care of their general practitioners, in the sense of having been in contact in the last six months, but this was brief and not necessarily for psychiatric reasons; discharge from general practice care is not in any case a clear-cut phenomenon.

In designing the study we deliberately avoided two alternative modes of employing nurses. One would have been to use nurses as extra therapists for patients continuing to see psychiatrists. This would have more directly tested the efficacy of the added contribution of nurses, but it would have produced a more expensive service. The second alternative would have been to interdict completely contacts with psychiatrists, enabling a direct comparison of the two professions. This probably would not have been feasible. Instead we chose a course in which the natural pattern of services was allowed to find its own level. The work was within routine catchment area services and can be extrapolated outside the research framework.

It is important that this was not a direct comparison of nurses and doctors. In the experimental service the nurses were not working independently, but as part of psychiatric teams, under the care of which the patients remained. Treatment plans and problem cases were discussed with psychiatrists and guidance sought at times of difficulty. A weekly case seminar was also held for a time. Some of the nurses experienced initial difficulties adapting to the work with neurotic patients, which was less structured than care of schizophrenics. In the future it would be worthwhile to use more focused training.

Use of community psychiatric nurses within the multidisciplinary team is likely to increase in the future, partly in response to medical manpower restrictions. Overall the study findings support the role of such nurses in the after-care of neurotic patients. It appears to be feasible, without major disadvantages, and with some positive advantages.

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