MANAGEMENT OF SOCIAL DISABILITIES IN SCHIZOPHRENIA

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ABSTRACT

This study describes the profile and nature of social disabilities in schizophrenia and the effect of intervention on them. Sixty five schizophrenic patients who constituted the experimental group were compared with sixty patients from a different centre. They were evaluated at intake for negative symptoms, social disabilities and psychological impairments. One group was provided with medication alone and the other was exposed to an intervention programme comprising of social skills training, family education, occupational therapy and medication management training, etc. After one year, both the groups were evaluated on the same parameters. It was found that both groups showed decline in some negative symptoms and improvement in certain disabilities. Issues such as duration of intervention, components of intervention and role of psychosocial rehabilitation are discussed.

Key Words: Schizophrenia, social disabilities, intervention

The last decade has witnessed an increasing interest in the understanding of social disabilities in schizophrenia. The multi-country WHO study on measurement and reduction of psychiatric disabilities provided the necessary impetus for similar investigations. A few instruments were developed for the assessment of disabilities such as the Disability Assessment Schedule of the WHO (Jablensky et al., 1980), the Groningen Social Disabilities Schedule (DeJong et al., 1985; Wiersma et al., 1990), the Life Skills Profile (Parker et al., 1991), the Dysfunctional analysis questionnaire (Murthy et al., 1975) and the Schedule for the Assessment of Psychiatric Disability (Thara et al., 1988). With the passing of the legislation "Persons with disabilities Act", the study of disability has assumed even greater importance.

The profile and nature of disability, its relationship with clinical symptoms and its course over time have all been studied. (Biehl et al., 1986; Thara & Rajkumar, 1993; Cooper & Bostock, 1988). The WHO disability study, in its one year follow-up found that after a period of intervention, disability ratings improved in 36% of schizophrenic patients and showed no change in 64% (DeJong et al., 1985). A lack of correlation between social disabilities and clinical outcome found in a few studies (Dohrenwend et al., 1981) has been refuted by others (Hurry & Sturt, 1981; Pai & Kapur, 1982). It is also being increasingly recognised that disability is one of the outcome indices for chronic illnesses such as schizophrenia. The impact of disability on admission, utilisation and planning of health services, and its relationship vis-a-vis concepts as DALYs, Burden and QUALYs are bound to gain increasing importance in the next decade (Wilkinson et al., 1992; Rossi et al., 1989; Veltro et al., 1993; Murray & Lopez, 1997).

The present study is among the few which has looked at the impact of intervention programmes on disability incorporating a
longitudinal design. The aims of the present study were: (i) To study the nature and pattern of social disabilities in schizophrenia; (ii) to evaluate the effect of a standard intervention programme on the course of social disabilities, negative symptoms and psychological impairments.

MATERIAL AND METHOD

Sample and sites: Two samples satisfying DSM-III criteria for schizophrenia were selected for the study conducted between 1989 & 1991. Group A comprised of 60 consecutive patients drawn from the psychiatry department of the Government General Hospital, Madras. This is a predominantly out patient and teaching centre with limited admission facilities. Its catchment area covers the entire city of Madras. Group B with 65 patients attended the Schizophrenia Research Foundation (SCARF), Madras. SCARF is a non-governmental organization which runs an OPD, a day care centre and is a referral rehabilitation centre focusing on vocational and social rehabilitation of chronic schizophrenic patients. In both centres, treatment & rehabilitation cost nothing for the patient and his family.

Inclusion criteria: (i) Satisfying DSM-III (APA, 1980) criteria for schizophrenia; (ii) patients had to be permanent residents of Madras city or suburbs to enable follow-up; (iii) those exposed to the rehabilitation programme must be well enough to comply with the programme and should not be acutely ill.

Inclusion of the sample was done during the period 1989-1991. The period of follow-up was one year from the time of inclusion.

Instruments: Baseline data was collected for the groups using the following: (i) Psychiatric History and Social Description schedule (PHSD) (WHO, 1973). This was used to elicit the personal and sociodemographic details of the patients; (ii) The Schedule for Assessment of Negative Symptoms (SANS) (Andreasen, N.C., 1983); (iii) The Disability Assessment Schedule (DAS) (Jablensky et al., 1980); (iv) The Classification of Intellectual and other Psychological Impairments (CIPI, 1986).

The SANS & DAS were administered by research psychiatrists trained in their use, the CIPI by the psychologist and the PHSD by the social worker. Inter-rater reliability exercises conducted between the psychiatrists in the two centres and the other two research staff yielded a Kappa of 0.88. Interviews of patients, care givers and case records were used to fill up the schedules.

The intervention programme: The experimental group, namely the sample attending the day care centre at SCARF (Centre A) was subjected to a social intervention package offered by a trained, multi-disciplinary team of psychiatrists, social workers and psychologists. The duration of intervention was 12 months. The constituents of the package were:

a) Psychoeducational family management was a standard programme designed to provide support to families, help them have a better understanding of the illness and offer problem solving approaches. This technique was expected to generate a better understanding of the patients by the family and equip them to deal with emergencies and crises.

b) Social skills training was a structured programme that focussed on teaching specific skills like money management, communication, self care, interpersonal skills, home maintenance and work skills. This programme involved individual and groups approaches in the form of theoretical and practical training. The idea of this was to re-socialise the patients and make him/her as independent as possible.

c) Work units kept patients engaged in work for 5-6 hours in a sheltered environment. While imparting some skills and inculcating the work discipline and schedule, it was an attempt to return the patient to the mainstream of employed life.

d) Medication management training was an educational approach targeted at both patients
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and caregivers regarding the importance of maintenance medication, compliance with various treatment procedures and an overview of therapeutic benefits and side effects.

The comparison group at centre B received no specific intervention aside of medication in all cases and ECTs in three only. They were however subject to regular follow-up and hence to a large extent, compliance with medication was ensured. It was only a psychiatrist who was managing the client in centre B, since medication was the only intervention offered.

Follow up: After one year both groups were assessed using the SANS, DAS and the CIPI. Those who did not turn up were contacted by letters or house visits. At the end of one year, 70% of the experimental group and 78% of the control group could be followed up. The reasons for dropouts in both centres were:
1. Location of facility not convenient, need to commute long distances.
2. Change in address without intimating the professional team.
3. Non cooperation of the patients in coming to the facility.
4. Discontinuation of treatment after improvement.
5. Need for inpatient treatment and subsequent hospitalisation in a different facility.
6. Difficulty in complying with the demands of the special intervention package like social skills training and vocational rehabilitation.

Data Analysis: At the end of one year of follow-up, four sets of data were available for analysis: inclusion data for the experimental group A, inclusion data for the comparison group B, and follow-up data for both these groups, the SPSS/PC ver. 4.0 was used. To satisfy the objectives of the study, the following univariate analytical procedures were performed.

- Comparison of inclusion data between the two centres using the chi-square test and t-test wherever applicable.
- Comparison of inclusion and follow-up data for the whole sample and for each group using the paired t-test.

RESULTS

Description of samples: There were no significant differences between the samples at the two centres on sex distribution, age, illness duration, duration of hospitalisation, kind of treatment received, pattern of course of illness, educational level of patients, spouse and parents; employment status of patients; and history of alcohol and drug abuse. Patients from centre B had a significantly higher age at onset (26.51±10.87) than those from centre A (22.9±5.86, p < 0.05).

Negative symptoms: There were a few differences at inclusion between the two centres in negative symptoms measured by the SANS. These were in the areas of alogia and avolition-apathy with the sample from centre A having significantly higher scores in these areas than that from centre B (Table 1).

Social disabilities: The overall scores in both centres revealed that this was a moderately disabled group (1.95 & 1.8 on a rating of 0-3). There were no significant differences between the samples in the two centres as far as disability scores were concerned. Among impairments, the only difference was in the area of “drives” with centre A showing lower scores than centre B.

Analysis of differences between inclusion & follow-up data: The next set of data analysis pertained to the differences between the inclusion and one year follow-up data on SANS, DAS and CIPI. This was done independently for the experimental and comparison groups.

Analysis of sample from centre A (experimental group): The following were the differences between inclusion and follow-up data for the group which received specialised intervention.

Negative symptoms: The group did not show improvement in two negative symptoms areas - alogia and anhedonia-asociality. However, significant improvement was seen in affective flattening, avolition-apathy and inattention (Table 2).
TABLE 1
CHARACTERISTICS OF TWO SAMPLES AT INTAKE

| Variable                  | Centre A | Centre B | Significance |
|---------------------------|----------|----------|--------------|
| Males                     | 41       | 37       | X²=2.25, NS |
| Females                   | 18       | 26       |              |
| Age (mean ± SD)           | 29.44±6.8| 30.92±9.53| NS           |
| Illness duration (mean months) | 84.2  | 65.2     | NS           |
| Age at onset              | 22.9     | 26.51    | t=2.21, p<.05|
| Alogia                    | 1.05     | 0.40     | t=4.62, p<.05|
| Avolition-Apathy          | 2.39     | 1.9      | t=2.36, p<.01|
| Global disability         | 1.95     | 1.80     | NS           |
| Drives (PIRS)             | 0.29     | 0.53     | t=2.8, p<.01 |

TABLE 2
NEGATIVE SYMPTOMS SCORES IN EXPERIMENTAL & COMPARISON GROUPS BEFORE AND AFTER INTERVENTION

| Item              | Inclusion Mean (SD) | Follow-up Mean (SD) | t   |
|-------------------|---------------------|---------------------|-----|
| Affect            | 1.90 (0.89)         | 0.61 (0.94)         | 3.77**|
|                   | 0.97 (1.02)         | 0.61 (0.95)         | 1.91 |
| Alogia            | 0.99 (0.85)         | 0.53 (1.32)         | 1.83 |
|                   | 0.35 (0.68)         | 0.24 (0.80)         | 0.80 |
| Avolition-Apathy  | 2.35 (0.92)         | 1.49 (1.38)         | 3.39**|
|                   | 1.67 (1.10)         | 1.31 (1.22)         | 2.68* |
| Anhedonia         | 1.99 (1.10)         | 1.80 (1.53)         | 0.71 |
| Asociality        | 2.09 (1.35)         | 1.21 (1.40)         | 3.49**|
| Attention         | 1.10 (1.32)         | 0.56 (0.96)         | 2.32  |
|                   | 0.66 (1.13)         | 0.35 (0.92)         | 1.59  |

Social disabilities: The areas which showed significant improvement after the intervention were underactivity, social withdrawal, participation in family life, work performance and interest in work (Table 3).

Psychological impairments: Areas of emotion, psychomotor speed, motivation and speech improved after intervention and this was also reflected in the total impairment scores (Table 4).

Analysis of sample from centre B (comparison group)

Negative symptoms: The comparison group did show improvement in two negative symptom areas - avolition-apathy and anhedonia-asociality (Table 2).

Social disabilities: Underactivity, slowness, social withdrawal, participation in family life, and work performance and interest registered an improvement after one year (Table 3).

Psychological impairments: These showed
### TABLE 4
**PSYCHOLOGICAL IMPAIRMENTS SCORES EXPERIMENTAL & COMPARISON GROUPS BEFORE AND AFTER INTERVENTION**

| Item                  | Inclusion | Follow-up | t     |
|-----------------------|-----------|-----------|-------|
|                       | Mean (SD) | Mean (SD) |       |
| Intellectual cognitive| 0.13 (0.25) | 0.11 (0.24) | 0.35  |
| Sleep                 | 0.29 (0.32) | 0.19 (0.46) | 1.16  |
| Attention             | 0.34 (0.30) | 0.13 (0.22) | 4.17* |
| Memory                | 0.29 (0.34) | 0.13 (0.33) | 2.16* |
| Speech                | 0.44 (0.31) | 0.18 (0.35) | 4.07**|
| Reality testing       | 0.55 (0.54) | 0.29 (0.76) | 1.93  |
| Drives                | 0.32 (0.32) | 0.25 (0.67) | 0.53  |
| Motivation            | 0.59 (0.35) | 0.32 (0.30) | 4.49**|
| Emotion               | 0.45 (0.30) | 0.27 (0.30) | 3.39**|
| Psychomotor           | 0.41 (0.42) | 0.16 (0.25) | 3.24**|
| Total impairment      | 0.36 (0.19) | 0.20 (0.33) | 2.92**|

* p < 0.05, ** p < 0.01. Under each items first row denotes experimental and second row denotes comparison group.

improvement, especially in sleep, attention, speech, drives and total impairment.

### DISCUSSION

The disability profile of the entire sample at inclusion showed that this was not a very highly disabled group although the duration of illness was about 7 years in sample A and 5 years in sample B. The total disability score was just below 2 indicating moderate disability. As in other Indian studies, disability was greater in both the areas of work performance and interest in work. (Thara, R., 1994). Participation in family life and social contacts rank next with low scores on self-care and slowness. The importance of work related disability has been consistently observed in the Indian setting, thereby emphasizing the active need to intervene in this area. It also reflects the perceived importance of the family to this area of the patient's functioning. This concern about employment in a setting which does not have any social security benefits for this group of disabled is only natural.

This is also the group which is most suitable for psychosocial intervention since it has not reached that stage of chronicity after which any intervention seems futile.

The two samples are fairly well matched for comparison, the only differences being a longer duration of illness and more negative symptoms in Group A (not statistically significant). They did not differ substantially as far as the social disabilities were concerned. The disability patterns showed an interesting trend as far as both the groups were concerned. The disability scores were lower when it came to dealing with the self (self care slowness), but progressively increased when it came to dealing with the immediate environment - the nuclear family and the immediate social network (underactivity, social withdrawal, participation in family life), and was highest in those areas which involved interface with the larger social environment (social contacts, work role, general interests and information). After intervention, both the group showed significant improvement in negative symptoms. Although self-care did not improve, work related areas, underactivity, social withdrawal and participation in family life improved significantly after intervention. This shows that although the intervention did not help the patients to substantially change their orientation to themselves, they did seem to make the effort when it came to dealing with the immediate social environment. Even the lack of improvement in social role performance had been contributed mainly by lack of improvement...
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in marital and parental roles, while work functioning had improved.

As far as negative symptoms were concerned, the experimental group (Group A) showed more substantial improvement in the areas of affective flattening, alogia and attention, whereas the comparison group showed greater improvement in areas of avolition - apathy and anhedonia-asociality. It appears that the provision of a special supportive social environment for the experimental group reduced their need to depend on their existing environment and therefore helped the patients focus on problems within themselves viz. affective communication (affective flattening), verbal communication (alogia) and concentration (attention). The comparison group B on the other hand, by virtue of not being provided a special or supportive environment had to depend on their existing one and therefore seemed to concentrate on enhancing their skills relating to interfacing with their social environment- actively reaching out and maintaining contacts (apathy, asociality). It was also imperative for the latter group to return to work earlier, while many members of group A were engaged in sheltered workshops.

This study was conceived of as a preliminary evaluation of psychosocial intervention programme on an operationally defined sample of schizophrenic patients. The evaluation was done on three patient related dimensions- negative symptoms, social disabilities, and psychological impairments, using appropriate instruments. The mental health professional who made the assessment was not the same as one who administered the intervention. This represented the investigator's best attempt to reduce bias. It was not however possible to conduct the study as a blind one, as the two samples were located at different centres and each centre had to have its own research team to facilitate logistics.

The other limitation of the study was the duration of intervention itself. We are all aware that negative symptoms are more refractory to intervention and it may be that a period greater than a year may be required to bring about substantial or measurable changes in negative symptoms. Intervention specifically aimed at negative symptoms spread over a longer period of time are likely to offer more insights into this issue.

ACKNOWLEDGEMENTS

We acknowledge the efforts of Dr. Vijay Nagaswami who coordinated the work at SCARF, as well as other colleagues who had contributed to the study. The support of Dr. Sarada Menon, and the Dean of Madras Medical College is also recognised.

REFERENCES

American Psychiatric Association (1980) Diagnostic and statistical manual of mental disorders, Edn. 3, ( DSM III), Washington, D.C.

Andreasen, N.C. (1983) The scale for assessment of negative symptoms. University of Iowa, Iowa city.

Biehl, H., Maurer, K. & Schubart, C. (1986) Prediction of outcome and utilisation of medical services in a prospective study of first onset schizophrenics. Results of a prospective 5 - year follow-up study. European Archives of Psychiatry and Neurological Sciences, 236, 139-147.

Classification of Intellectual and other Psychological Impairment (1986) Department of Social Psychiatry, University of Groningen, Netherlands.

Cooper, J.E. & Bostock, J. (1988) Relationship between schizophrenia, social disability, symptoms and diagnosis, In : Handbook of Social Psychiatry, (Eds.) Henderson, A.S. & Burrows, G.D., Elsevier, Amsterdam - New York- Oxford.

De Jong, A., Giel, R., Sloof, C.J. & Wiersma, D. (1985) Social disabilities and outcome in schizophrenic patients. British Journal of Psychiatry, 147, 631-636.

Dohrenwend, B.S., Cook, D. & Dohrenwend, B.P. (1981) Measurement of social functioning in community populations, In : What is a case? (Eds.) Wing, J.K., Bebbington, P. & Robins, L.N., London : Grant McIntyre.
Hurry, J. & Sturt, E. (1981) Social performance in a population sample - relationship to psychiatric symptoms, In: What is a case? (Eds.) Wing, J.K., Bebbington, P. & Robins, L.N., London: Grant McIntyre.

Jablonsky, A., Schwartz, R. & Tomov, T. (1980) WHO collaborative study on impairments and disabilities in schizophrenic patients. A preliminary communication. Objective and methods. *Acta Psychiatrica Scandinavica*. (Suppl 285) 62, 152-163.

Murray, C.J.L. & Lopez, A.D. (1997) The utility of DALYs for public health policy and research: a reply. *Bulletin of the WHO*, 75 (4), 377-381.

Murthy, R.S., Anuradha, D. & Pershad, D. (1975) Psychiatric disability scale - a preliminary report. *Indian Journal of Clinical Psychology*, 2, 183-187.

Pai, S. & Kapur, R.L. (1982) Impact of treatment intervention on the relationship between dimensions of clinical psychopathology, social dysfunction and burden on the families of psychiatric patients. *Psychological Medicine*, 12, 651-658.

Parker, G., Rosen, A., Emdur, N. & Hadzi-Pavlov (1991) The life skills profile: psychometric properties of a measure of assessing function and disability in schizophrenia. *Acta Psychiatrica Scandinavica*, 83, 145-152.

Rossi, A., Stratta, P., Bolino, F., De-Leonardis, R., Schiazza, G. & Casacchia, M. (1989) Social disability and clinical symptomatology in schizophrenia: Their impact on compulsory admission. *Psychopathology*, 22 (4), 177-181.

Thara, R., Valecha, V. & Rajkumar, S. (1993) Schedule for the assessment of psychiatric disability - a modification of the DAS. *Indian Journal of Psychiatry*, 35 (1), 47-53.

Thara, R. & Rajkumar, S. (1994) Disability in schizophrenia. Ph.D Thesis, Madras University.

Veltro, F., Magaliano, L., Lobrae, S. & Morosini, P.L. (1999) Severe and persistently mentally ill patients in Italy: An overview of epidemiological and psychosocial findings. *International Journal of Social Psychiatry*, 39 (42), 285-302.

Wiersma, D., DeJong, A., Kraaijcamp, H.J.M. & Ormel, J. (1990) GSDS-II. The Groningen Social Disabilities Schedule. Second version. Deptt. of Social Psychiatry, Netherlands: University of Groningen.

Wilkinson, G., Williams, B., Kekarian, H., McLees, S. & Falloon, I. (1992) QUALYs in mental health: A case study. *Psychological Medicine*, 22 (3), 725-731.

WHO (1973) International Pilot Study of Schizophrenia. Geneva.

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