

First 2 Years of Experience of “Residential Care” at “Sakalawara Rehabilitation Services,” National Institute of Mental Health and Neurosciences, Bengaluru, India

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ABSTRACT


Introduction: There is an unmet need for continuity-of-care is well known for those with severe mental disorders (SMDs) after acute care at hospitals in India. The “Sakalawara Rehabilitation Services (SRS)” functioned from March 2014 at “Sakalawara Community Mental Health Centre” (SCMHC) of “National Institute of Mental Health and Neurosciences,” Bengaluru, India in the concepts of residential care (half-way-home) with the aim to develop a replicable model. **Aim:** To review the inpatient records after the initial 2 years of experience in residential care at SCMHC. **Methodology:** Retrospective file review of inpatients at SCMHC from March 2014 to March 2016 in a semi-structured proforma designed for the study. Ethical committee of NIMHANS Bengaluru has approved the study. **Results:** The total number of inpatients during this period was 85. It was found that Schizophrenia spectrum disorders were the most common diagnosis among these patients. The activity of daily living and psycho-education were the most common individual interventions. The majority of families underwent structured family psycho-educational interventions. This review also demonstrated the feasibility of tele-aftercare in continuity of care after discharge of patients. **Conclusion:** SRS kind of residential set-up is feasible and demonstrated effectiveness in maintaining continuity of care of SMDs. There is a need for better structured and customized interventions. There is further a scope for tele (video) aftercare for those with SMDs.

Key words: Aftercare, continuity of care, rehabilitation services, residential care, severe mental disorders

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INTRODUCTION

Recently published report of "National Mental Health Survey" of India from National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru estimated the current prevalence of all psychiatric disorders is 10.6%, of which, 0.7% is severe mental disorders (SMDs) which consists of schizophrenia and other psychotic disorders, as well as bipolar disorder.^[1] Despite effective pharmacotherapies, the course of SMDs is often the continuous and chronic illness with frequent relapses and recurrences. One-third of them require long-term psychiatric rehabilitation (PR) in the form of various psychosocial interventions.^[2]

PR assists the individuals with persistent and serious mental illness to develop occupational, emotional, social, and intellectual skills needed to live in the community with the least amount of professional support toward an achievable recovery.^[3,4] Relearning these skills helps in reducing the debilitating disabilities for better reintegration into the society.^[5] The aim of PR is to assist the patients to gain the skill needed for daily living, self-medication management, engagement with the community support to gain help and sense of identity.^[6]

There are few published studies on PR from India.^[7] An earlier study from NIMHANS reported that vocational rehabilitation was the most common reason for PR assessed at the time of the first intake of the in-patient referrals, but it lacks the details of the interventions carried out.^[8] A retrospective study from half-way home set-up from Bengaluru reports the effectiveness of psychosocial rehabilitation program covering of battery of an individual and family interventions, however, details of these interventions in isolation are not reported.^[5] Gopinath *et al.* Studied the profile of patients who continued and discontinued day care hospitalization and reported that most of the discontinuation happens within a month of referrals.^[9] These studies suggest the need of rehabilitation services and continuity of care to ensure continued engagement in the therapeutic process toward reintegration and recovery.

The development of PR in India is in its infancy. There is a huge unmet need in public funded institutes.^[10] PRs in India are run predominantly by nongovernmental organizations or by private organizations.^[11] Publicly funded institutions in India predominantly function as inpatient units for acute care of severely mentally ill; a few run day care set ups but very few of them include half-way or long stay homes towards continuity

of care.^[7] PR in private settings in India caters predominantly for substance-related disorders, and less for SMDs. Data from public funded residential care for rehabilitation of SMDs are limited for reasons unclear. In this background, it would be interesting to carry on an audit of PR activities carried out in a natural setting of a newly established PR section at "Sakalawara Community Mental Health Centre," (SCMHC) NIMHANS, Bengaluru. As per our knowledge, this is the first one of its kind, a PR with a residential set-up for patients with SMDs in India by a publicly funded academic institution.

This study was carried out with aims and objectives to understand the sociodemographic and clinical parameters of patients admitted to the residential continuity care unit at "Sakalawara Rehabilitation Services," (SRS) NIMHANS Bengaluru. Furthermore, to audit, the various interventions carried out for these patients. This study furthermore reports the short-term outcome from an innovative tele-aftercare service of these patients.

METHODOLOGY

This is a retrospective study carried out at SRS section of SCMHC, NIMHANS, Bengaluru. Ethical Committee of NIMHANS has approved this study.

A rural community mental health center was established at Sakalawara village by NIMHANS in 1976. It was a popular destination for community psychiatry activities of NIMHANS. Sakalawara, the village is 15 km away from the main campus of NIMHANS at Anekal Taluk of Bengaluru urban district. An additional unit for after-care (with a half-way home concept) was started in March 2014. It involves inpatient residential care for rehabilitation of SMDs along with their family members. It consists of 22 cottages including two deluxe cottages and Mahabodhi building for vocational training. PR interventions at SRS are delivered by a multidisciplinary academic team comprising of psychiatrists, psychiatric nurses, psychiatric social workers, clinical psychologists, and vocational trainers. It also provides academic training to psychiatric residents, trainees of psychiatric nursing, psychiatric social work, and clinical psychology supervised by respective consultants.

The patients referred to SRS are from adult psychiatry units of Department of Psychiatry in NIMHANS, Bengaluru with a formal referral pro forma giving the reason for referral. A senior resident who is a qualified psychiatrist from SRS then screen's these referred patients for suitability for PR in residential care

(i.e., risk assessment and benefit from residential care). Once found suitable, patients are admitted with family members. After the admission of these patients, the SRS team have continuous liaison about the progress of all these patients with their respective referred team.

After admission, each patient undergoes detailed evaluation, and the management is then collaboratively planned along with the multidisciplinary team. There are common interventions to all patients and some personalized interventions for specific patients. This depends on their need which is decided soon after admission. These interventions are carried out in both individuals as well as group-based format. A scheduled daily structure is prepared at the beginning and updated periodically for each patient.

Data for this paper were collected from chart review. Files were reviewed using a semi-structured pro forma (designed for this study) which captured data related to sociodemographic profile (except names to maintain confidentiality), illness, assessments, interventions, discharge, and tele-aftercare. Tele-aftercare services of these patients were carried out by the psychiatric social work team. Data related to this was captured using a six item semi-structured questionnaire with binary responses as "adequate" or "inadequate" for the first five items (medication adherence, self-care, activity of daily living (ADL), communication and interpersonal relationship, work functioning) and "yes"/"no" responses for the 6th item (whether plan of action made at the time of discharge was carried out or not). The outcome of the data from the first call of tele-aftercare service (telephonic follow-up) was analyzed for this study. In case any patient was admitted more than once during this period, data from the first admission were collected for the analysis.

RESULTS

Eighty-five patients were admitted during the first 2 years of functioning of SRS. Table 1 provides the baseline sociodemographic profile of these patients. Average age of these patients at the time of admission was 29.27 (± 7.09) years, 89% were male, 81% were never married, educated up to 13.4 years (59% from 10th to 15th years), residence scattered across India, but dominated from South Indian states (Karnataka - 30.6%, Kerala - 22.4%, Tamil Nadu - 8.2%, Andhra Pradesh - 7.1%, and West Bengal - 7.1%), dominated from middle class and urban background. Vocational rehabilitation (56%) and training in ADL (21%) were the two most common primary reasons for referral.

The clinical characteristic of patient population is provided in Table 2. The primary diagnoses in these

Table 1: Basic sociodemographic details of patient population

Sociodemographic parameter	Mean \pm SD/percentage
Age (years)	29.27 \pm 7.09 years
20-29	40 (47.1%)
30-39	31 (36.5%)
Others: 10-19; 40-49; 50-59	14 (16.4%)
Gender	
Male	76 (89.4%)
Female	9 (10.6%)
State of residence	
Karnataka	26 (30.6%)
Kerala	19 (22.4%)
Others	40 (47.1%)
Socioeconomic status	
Lower middle	37 (43.5%)
Upper middle	29 (34.1%)
Others: Lower (BPL); upper (APL)	19 (22.4%)
Background	
Urban	46 (54.1%)
Semi-urban	26 (30.6%)
Rural	13 (15.3%)
Education in years	13.4 \pm 2.86 years (minimum 6 years; maximum 19 years)
Marital status (single)	69 (81.2%)
Preadmission occupation	Never employed - 51 (60%)
Reason for referral	Vocational (56.2%); ADL (21.2%)

SD – Standard deviation; ADL – Activity of daily living; BPL – Below poverty line; APL – Above poverty line

patient population were schizophrenia spectrum disorders (61.2%), mood disorders (14.1%), and neurotic disorders including obsessive-compulsive disorders (OCDs) (12.7%). More than 50% of patients had an onset before the age of 18 years, but nearly 83% of patients had onset before the age of 25 years. Ninety-two percent had an insidious onset. An average duration of illness of these inpatients was 10.51 (± 6.78) years. Seventy-four percent of patients were on at least one antipsychotic (60% on 1, 24% on 2; 15% on clozapine and 19% on depot). OCD (N-4) and bipolar disorder (N-3) were the two common primary diagnoses of patients who are not on any antipsychotics (N-11). Sixty-seven percent had no lifetime use of a substance (33% had lifetime substance use dominated by nicotine in 17%). Twenty-two percent of inpatients continued to use substance during this admission (mainly nicotine in 21%). More than two-third of patients had significant family history of psychiatric illness (dominated by psychotic spectrum disorders in 27%). Just less than half (47%) had one or other medical illness (50% them had noncommunicable diseases such as diabetes mellitus, obesity, hypertension, and dyslipidemia). Similarly, more than half of them had a significant history of premorbid temperament issue or personality trait/disorder.

Table 2: Clinical characteristics of patient population

Clinical parameters	Mean±SD/percentage
Onset	
Age at onset	19.12±5.52 years; 50% onset <18 years age and 33% onset 19-24 years
Mode of onset	Insidious - 91.8%
Duration of illness	10.51±6.78 years (minimum 1 year; maximum 36 years) <10 years in 49 patients
Medications-antipsychotics	
On antipsychotics (at least one)	74%
One antipsychotic	60%
Two antipsychotics	24%
On clozapine	13 (15.3%)
On depot antipsychotics	16 (18.8%) (13 typical, 3 atypical)
Not on any antipsychotics	11 (12.94%)
History of substance use	
Any	Life time - 28 (32.5%), current use - 19 (22.4%)
Nicotine use	Life time use - 22 (26%); active use - 19 (22.4%)
Family history of psychiatric illness	58 (68.2%)
Comorbid medical illness	40 (47.1%); NCD in 20.1% (17 individuals)
Premorbid personality	Abnormal personality traits or disorder in 47 (55.6%); rest well adjusted
Primary diagnosis	
Schizophrenia spectrum disorders	52 (61.2%)
Mood disorders (BPAD, RDD)	12 (14.1%)
Neurotic disorders + OCD	11 (12.7%)

NCD – Noncommunicable diseases; BPAD – Bipolar affective disorder; RDD – Recurrent depressive disorder; OCD – Obsessive-compulsive disorder; SD – Standard deviation

For the purpose of clarity, interventions were classified as individual, family, and group in Table 3. Among individual interventions, top five were structured ADL (91.8%), psycho-education (82.4%), craft training (74.1%), basic computer skills training (71.8%), and painting (70.6%). Among these 42% and 40% underwent social skill training and supported employment, respectively. Eighty-four percent of them had undergone structured family psycho-educational intervention. Top three group interventions were patient group session, family group session, and picnic/day-out.

Admission and discharge details are given in Table 4. The average duration of stay of these patients was 88 (±57) days; among which 95.3% stayed with their family. Seventy-one percent of them had planned discharged, and 29.4% had premature discharge (one for suicidal risk and five for violence).

Short-term outcome from tele-aftercare services is provided in Table 5. First tele-aftercare call was made

Table 3: Interventions: Types and its usage in number of patients/their family undergone

Type of intervention	n (%)
Individual intervention	
ADL	78 (91.8)
Psycho-education	70 (82.4)
SST	36 (42.4)
Computer	61 (71.8)
Craft	63 (74.1)
Tailoring	29 (34.1)
Painting	60 (70.6)
Individual therapy	12 (14.1)
Supported employment	34 (40)
Cognitive training	12 (14.1)
Group intervention	
Patient group session	68 (80)
Family group session	64 (75.3)
SST	48 (56.5)
Picnic/day out	63 (74.1)
Get together	57 (67.1)
Cooking demo	51 (60)
Sports	56 (65.9)
Cognitive training	2 (2.4)
Family intervention	
Psychoeducation	71 (83.5)

ADL – Activity of daily living; SST – Social skill training

after an average of 102 (±79) days after discharge. Among 85 patients, 59 patients (69.4%) were contacted over telephone; the remaining 14 had no response to call, 8 were premature discharge and 4 of them were not called up. Among these, 92% followed adequate medication compliance, 73% with adequate ADL, 93% had adequate self-care, 71% of them maintained an adequate communication and interpersonal relationship, 61% continued to work adequately and 66% carried their action plan as decided at the time of discharge. Readmission rate during first 2 years at SRS was 9.4%.

DISCUSSION

This retrospective chart review gives a glimpse of the functioning of a government funded half-way home. A total of 85 patients were admitted during the initial 2 years of functioning of the center. The results summarily suggest that there is a need for such centers and that potentially meaningful patient-related outcome can be achieved by the multidisciplinary treatment/rehabilitation approaches. There may be a need for public funded rehabilitation centers at different parts of our country as SRS has catered mainly to the Southern parts of India. Access to SRS was limited to rural and poor patients secondary to the logistics issues such as difficulty to access food and transport facilities.

Table 4: Admission and discharge details

Variables	Mean ± SD/Percentage
Duration of admission (days)	87.58±57.39
Mode of patient stay	With family - 81 (95.3%)
Mode of discharge	Planned - 60 (71%) Premature - 25 (29%) (17 for medical including suicide and violence, 6 for social and 2 for other reasons)

Table 5: Outcome assessment from tele (telephonic) aftercare

Items	Responses n (%) 59 of the 85	
	Adequate	Inadequate
Medication compliance	54 (91.5)	5 (8.5)
ADL	43 (72.88)	16 (27.12)
Self-care	55 (93.2)	4 (6.8)
Communication and IPR	42 (71.18)	17 (28.82)
Work functioning	36 (61)	23 (39.98)
Action plan carried out	39 (66) ("yes")	20 (33.9)

ADL – Activity of daily living; IPR – Intellectual property right

Our study also highlights that young males of the working age group who are yet to be married seek rehabilitation to meet up the possible societal norms of a young functional male member. This may also suggest the need of affordable and cost-effective models for rehabilitation for these disabling SMD's for reintegration of these individuals into the society. This is reflected in reason for referral for PR as vocational training.

Possible predictors for the need of SRS kind of rehabilitation centers are: Early onset SMDs with schizophrenia, mood or neurotic disorder; early course of illness; some kind of treatment resistance to pharmacotherapy with strong family history of psychotic illness and premorbid temperament/personality difficulty. There is a need to evolve patient-friendly treatment policy for nicotine use of these patients during their stay as inpatient.

This study establishes list of interventions carried out at SRS during initial 2 years of functioning. A major limitation of audit of these interventions is an absence of data on quantifying the intervention such as frequency and time of session/s. In the future, there is a need to design a customized and structured, both individual as well as group format of interventions of at least top three interventions in each category and study further to assess the effectiveness of each intervention in real world settings with better research designs.

The average duration of stay at SRS was around 3 months keeping in tandem with that of the half-way

homes. During the stay, family caregivers also underwent various interventions which facilitated them to act as therapists at home after discharge. SRS had 29% premature discharge for various reasons which may come down with further experience. There should be contingency plan for managing these premature discharges or prevention of these kinds of premature discharges with rigorous screening before admission.

To supplement and maintain continuity of care, an initial experience from SRS suggests that it is feasible for tele (video) aftercare services as well. This aftercare service is good way to maintain the continuity of care with potentials to integrate into routine care. This is one of the felt needs in the pathway to recovery in long-term rehabilitation of these patients.

Limitations

Inherent limitations of chart review such as missing some notable information such as quantification of each intervention. The outcome assessment of tele-aftercare is in binary responses which may have a subjective bias. One of the limitations is referral from adult psychiatric unit of the same institute. There is the absence of patients of substance use disorder in sample and also the absence of a control group.

CONCLUSIONS

This audit of initial 2 years of residential care at SRS demonstrated that it is feasible to develop SRS kind of rehabilitation set-up. There are different kinds of PR interventions which may be helpful, but there is a need for more structured and personalized tailor-made interventions. There is further scope of tele (video) aftercare for continuity of care among SMDs which could be tapped in future.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. National Mental Health Survey of India, Survey 2015-16. 1st ed. Bengaluru: Ministry of Health and Family Welfare, Government of India; 2016. p. 14. Available from: http://www.nimhans.ac.in/sites/default/files/u197/National%20Mental%20Health%20Survey%20-2015-16%20Summary_0.pdf. [Last cited on 2017 Jan 21].
2. Thara R, Patel V. Role of non-governmental organizations in mental health in India. *Indian J Psychiatry* 2010;52 Suppl 1:S389-95.
3. Rössler W. Psychiatric rehabilitation today: An overview. *World Psychiatry* 2006;5:151-7.
4. Adair CE, McDougall GM, Mitton CR, Joyce AS, Wild TC, Gordon A, *et al.* Continuity of care and health outcomes among persons with severe mental illness. *Psychiatr Serv* 2005;56:1061-9.
5. Chowdur R, Dharitri R, Kalyanasundaram S, Suryanarayana RN. Efficacy of psychosocial rehabilitation program: The RFS experience. *Indian J Psychiatry* 2011;53:45-8.
6. Strauss JS. What does rehabilitation accomplish? *Schizophr Bull* 1986;12:720-3.
7. Chavan BS, Das S. Is psychiatry intervention in Indian setting complete? *Indian J Psychiatry* 2015;57:345-7.
8. Desai G, Narasimha A, Harihara SN, Dashrath MS, Bhola P, Berigai PN, *et al.* A study on first intake assessments of in-patient referrals to psychiatric rehabilitation services. *Indian J Psychol Med* 2014;36:236-8.
9. Gopinath PS, Sharma PS, Reddy MV. Patients who discontinue day hospitalisation – An analysis. *Indian J Psychiatry* 1987;29:197-201.
10. Deva P. Psychiatric rehabilitation and its present role in developing countries. *World Psychiatry* 2006;5:164-5.
11. Shankar J, Muthuswamy SS. Support needs of family caregivers of people who experience mental illness and the role of mental health services. *Fam Soc* 2007;88:302-10.