Introduction: Psychosocial rehabilitation is the process that facilitates opportunities for persons with chronic mental illness to reach their optimal level of independent functioning in society and for improving their quality of life. However, such psychosocial rehabilitation centers are limited in India. Aims: The present study assesses psychosocial rehabilitation centers (of urban day-care and rural residential rehabilitation center) operated by Ashadeep Charitable Foundation, a civil service organization and its effect on health outcomes of patients living with chronic mental illness. Materials and Methods: Records of 170 cases were retrieved for secondary analysis of demographic information, diagnosis, duration of stay, and health outcomes. Results: Rehabilitation activities included yoga, light physical exercises, group discussion, training for daily living skills, social skills, life skills, vocational training, individual, and family counseling. In addition, extensive outreach activities, mental health camps were also integral part of the rehabilitation activities. Patients who have accessed rehabilitation services were diagnosed with schizophrenia, psychosis, bipolar disorder, depression, and intellectual disability. The average duration of rehabilitation of patients (other than persons with intellectual disability) was ranged from three to four months. Out of those rehabilitated, 69% of them were successfully re-integrated with the family. Conclusion: Combination of pharmacological and psychosocial interventions are effective for re-integrate patients with mental illness to the family. This model of community-based rehabilitation has potential for scale-up.

Keywords: Chronic mental illness, community-based rehabilitation, Gujarat, psychiatric rehabilitation, recovery
rehabilitation as a feasible option for low and middle-income countries as it can be effectively delivered by trained lay health workers under supervision by the mental health specialist.[4-7]

The World Health Organization recommends community-based psychiatric rehabilitation to improve quality of life and ensure inclusion and participation of persons with mental illnesses. However, limited number of psychosocial rehabilitation centers exist despite alarmingly high incidence of mental illnesses. The present study aimed at assessing the model psychosocial rehabilitation centers (urban day-care and rural residential rehabilitation center) in Gujarat, its effects on health outcomes and feasibility for the scale-up.

### About Ashadeep Foundation

Ashadeep Charitable Foundation is a civil service organization located in Junagadh district of the Gujarat State. It aims to help people with mental illness lead their lives with dignity and self-respect. Ashadeep runs a day-care center in Junagadh city as well as a residential rehabilitation centre in the village Gorsar, which is approximately 100 km away from Junagadh. Rehabilitation services are provided free of cost to all patients.

### Methodology

A mixed-method research approach was used to assess the functioning of rehabilitation centers. Patients data from April 2017 to March 2018 was retrieved for secondary data analysis to understand patients’ disease characteristics, duration of stay at rehabilitation centers and health outcomes. Participant observation of rehabilitation centers and informal interactions with the center staffs were conducted to understand treatment approaches, operational challenges, and the acceptance of this approach.

### Results

Results are presented in four sections: (1) profile of psychiatric patients, (2) rehabilitation activities at centers, (3) health outcomes, and (4) operational challenges.

#### Profile of psychiatric patients

Records of 170 patients (out of 519 registered patients) from April 2017-March 2018 could be retrieved. Detailed profile of other than 170 patients was not available at the centers. The analysis was categorized into three themes: Demographic characteristics of patients, disease classification, and duration of the stay.

a. **Demographic characteristics of patients.** The mean age of patients was 36 years. More than half of the patients were married. Most patients (82%) had at least primary level education of primary and above whereas 18% of the patients were illiterate. However, it is peculiar to see that 45% of the patients were not engaged in formal employment and rather carried out some household chores. Descriptive analysis of the cases is presented in Table 1.

b. **Disease classification.** The data on the disease was classified according to International Classification of Disease 10 and Diagnostic Statistical Manual 5 in five major groups: Schizophrenia (46%), psychosis (21%), bipolar disorder (13%), depression (10%) and intellectual disability (10%). In terms of gender, the majority of the patients were men (64%) while 36% were women. Disease wise gender details are presented in Table 2. Mental illnesses such as schizophrenia, psychosis were reportedly higher in men while major depression was dominant amongst women.

c. **Duration of stay.** The average duration of rehabilitation of persons with mental illness (other than persons with intellectual disability) was 3.7 months. Persons with intellectual disability had stay period ranged from 6 months to year and in few cases more than a year. Table 3 also represents the duration of stay at the centre. Out of those rehabilitated, majority of them (69%) were successfully re-integrated with the family and to the community, 9% were ready for sheltered workshop while 16% of them were still in the training phase.

d. **Footfall of patients.** The annual summary patients visited the centers and rehabilitated from 2004 to 2017 was obtained from published reports of the organization. It shows a steady rise of the patients accessing rehabilitation center and

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### Table 1: Socio-Demographic Data Ashadeep foundation (April 2017-March 2018)

| Characteristic       | Variables | n  | %  |
|----------------------|-----------|----|----|
| Age (v170)           | Mean=36.16, SD=14.11 |    |    |
| Gender (n=170)       | Male      | 108 | 63.5 |
|                      | Female    | 62  | 36.5 |
| Marital Status (n=170) | Single   | 68  | 40  |
|                      | Married   | 88  | 51.8 |
|                      | Divorced  | 10  | 5.9 |
|                      | Widow     | 4   | 2.4 |
| Religion (n=170)     | Hindu     | 153 | 90  |
|                      | Muslim    | 16  | 9.4 |
|                      | Other     | 1   | 0.6 |
| Education (n=169)    | Illiterate| 30  | 17.8 |
|                      | Primary   | 50  | 29.6 |
|                      | Secondary | 57  | 33.7 |
|                      | Higher Secondary | 12 | 7.1 |
|                      | Graduation| 13  | 7.7 |
|                      | Post‑Graduation| 7 | 4.1 |
| Living situation (n=133) | Nuclear family | 109 | 82 |
|                      | Joint family | 24  | 18  |
| Residence (n=170)    | Gujarat‑Urban | 112 | 65.9 |
|                      | Gujarat‑Rural | 57  | 33.5 |
|                      | Other State | 1   | 0.6 |
| Occupation (n=136)   | Job       | 26  | 19.1 |
|                      | Business  | 24  | 17.6 |
|                      | Study     | 6   | 4.4 |
|                      | Household Work | 61 | 44.9 |
|                      | None      | 19  | 14  |
| H/O Treatment (n=134) | Continue | 119 | 88.8 |
|                      | Discontinue| 6  | 4.5 |
|                      | Irregular | 7   | 5.2 |
|                      | Never taken| 2  | 1.5 |
successfully rehabilitated and reintegrated to the family and the society. Figure 1 shows the number of patients visited the center and those rehabilitated.

**Rehabilitation activities at centers**

Rehabilitation activities primarily comprised of routine activities, outreach activities, and livelihood activities which are described as follow:

a) **Routine activities.** The daily routine included prayer, yoga along with laughter therapy, light physical exercise, group discussion, recreational activities and training them for daily living skills, social skills, life skills to re-integrate them with the family and community. Patients and their caretakers were regularly counselled.

b) **Outreach activities.** In addition to these, centres regularly organised training for the staff, mental health awareness camps in the community to educate people about mental health, diagnose and treat mentally ill patients, and issues disability certificates to persons with mental illness to access various social protection and other Government schemes.

c) **Livelihood activities.** The center encourages patients to engage in livelihood activities particularly manufacturing handmade products. The profits earned were equally shared amongst patients. At the day-care center, the center provides a pick-up and drop facility for ensuring the regularity of patients in livelihood activities.

**Health outcomes**

Key outcomes are categorized in the three major themes: (1) rehabilitation and back to the community, (2) ready for sheltered workshop (3) still in training, and (4) drop out. It is quite evident from the Table 3 that a significant proportion of patients with mental illnesses (69%) were successfully treated and were rehabilitated back to the community. Approximately 16 per cent of them were still in the training while 9 per cent were just ready for the sheltered workshop. Interestingly, the dropout rate of the patients was mere 6 per cent. Higher rate of successful rehabilitation can be attributed to innovative approaches to engage patients, counseling patient and their family members on a regular basis and robust follow-up mechanism. At the day-care center, when the patient does not turn up for the counseling, the staff visit their home. The center follows-up rehabilitated patient for at-least a year.

**Operational challenges**

Major challenges faced by the center were high staff-turn over, efficient record keeping and effective patient information management. One of the reasons for high staff turnover was unmet expectations for salary. This staff turn-over reflected in incomplete documentation of patients’ records. The center is striving for its sustenance due to poor staff retention.

**Discussion**

Community-based psychiatric rehabilitation is an integrated model that consolidate efforts of multiple professionals, pharmacological intervention, patients’ key caretakers and sensitization of community members on mental illness. Salient characteristics of this approach aid rapid recovery and reintegration of persons with mental illness with family and the community.

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**Table 2: Distribution of the Various Mental Disorder Among Both the Genders (April 2017-March 2018)**

| Gender | Schizophrenia | Psychosis | Bipolar | Intellectual Disability | MDD | Total |
|--------|---------------|-----------|---------|-------------------------|-----|-------|
| Male   | 44            | 21        | 19      | 13                      | 8   | 105   |
| Female | 32            | 13        | 2       | 3                       | 9   | 59    |
| Total  | 76            | 34        | 21      | 16                      | 17  | 164   |

**Table 3: Outcome among different mental disorders and duration of Association with the Center (April 2017-March 2018)**

| Mental Disorders        | Rehabilitated and back to the community | Ready for sheltered Workshop | Still in Training | Drop out | Total | Duration of association with the centre |
|-------------------------|----------------------------------------|------------------------------|-------------------|----------|-------|----------------------------------------|
| Schizophrenia           | 39                                     | 4                            | 13                | 6        | 62    | 3.29 (57)                              |
| Psychosis               | 18                                     | 0                            | 7                 | 2        | 27    | 3.69 (26)                              |
| Bipolar                 | 12                                     | 1                            | 1                 | 0        | 14    | 2.92 (13)                              |
| Intellectual Disability | 8                                      | 7                            | 0                 | 0        | 15    | 1.8 (3)                                |
| Major depression disorder | 13                                    | 0                            | 0                 | 0        | 13    | 3 (13)                                 |
| Total                   | 90 (68.70%)                            | 12 (9.16%)                   | 21 (16.03%)      | 8 (6.11%)| 131 (100%) | 3.70 (112)                            |
A dynamic approach tailored to patients’ need, emphasis on medication compliance, optimistic staff involvement, training patients on basic skills, creating a supportive environment for the patients at the center as well as in the community are key architects of the patients’ recovery, rehabilitation and re-integration. Key characteristics of successful rehabilitation are discussed as follow:

**Integrated care**

Psychosocial rehabilitation is a multidimensional therapeutic effort which requires the active involvement of multiple professionals (e.g. psychiatrists, psychologists, occupational therapist, counsellors, outreach workers, psychiatric social worker, physicians etc.) and patients key caregivers. This unique model does not only provide pharmacological intervention and skills-based training but also enable patients for social and economic inclusion through vocational training and employment; and sensitize family and community members for acceptance of persons with mental illness.

**Independent living skills**

Independent living includes being productive in work or school, social relations, and family life. The main aspect of this dimension is the ability to take care of one’s personal and healthcare needs without assistance. Apart from these, independent functioning could also be defined as managing one’s own medication, and money without regular supervision. Community-based psychosocial rehabilitation center emphasized daily living skills, social, and life skills to enable persons with mental illness to live independently.

**Social recognition**

Persons with mental illness face stigma and discrimination at home, work, and society throughout life. And this stigma increases the intensity of the illness and prolongs recovery. Further, stigma and discrimination stop persons living with mental illness from receiving employment opportunities which again add economic burden to the family. Caregivers have reported a high burden of financial problems due to a family member with mental illness. Therefore, productivity in terms of self-reliance and economic contribution to support one’s family are often valued in society. Sustained employment is associated with reduced psychiatric symptoms, healthcare cost and increased levels of self-esteem and satisfaction. Work plays an important role in the process of recovery by engaging a person into a feeling of being able to contribute. Further, support from the family and the community members enhance self-confidence and allow persons with mental illness to adjust with new challenges.

**Social Behavior Change Communication**

The outreach program focused on social behavior change of caretakers and family members are effective in accepting persons with mental illness thereby reducing the stigma associated with mental illness. Engaging family members in the recovery process of mental illness through counselling is also one of the key determinants of their positive attitude towards mental illness.

A relatively high number of male patients suggest inaccessibility of rehabilitation services which systematically exclude women from an opportunity for social and economic inclusion. This indicates a need to address gender inequity in behavior change communication strategy for outreach.

**Community acceptance**

A high percentage of the rehabilitated patients, increased referral by community members and local psychiatrists, shorter duration of stay and relatively limited dropouts highlight acceptability of the model. This also indirectly indicate a reduction in stigma around mental illness. Finding of the study indicate that extensive outreach activities with the community and witnessing recovery of a person with mental illness increase acceptance as well as access rehabilitation services.

**Lessons Learned**

**Strengthening existing psychosocial rehabilitation services**

For recovery to become completely integrated into a public mental healthcare system, widespread systemic changes may be needed. This model can be strengthened further by providing and training lay health workers, specialists mental health service providers, and linking with tertiary mental health service provider for continuous education and specialist mental healthcare consultation through telemedicine. Clearly, mental health experts alone cannot manage all problems related to sustaining the recovery of patients with mental illnesses. Therefore, training community health workers or volunteers on mental health can potentially maximize effectiveness of the treatment and rehabilitation of persons with mental illnesses.

Such a model requires a robust information management system and documentation for monitoring of the progress and evaluation of its effects on patients’ recovery. Collaborating with other civil service organization, district-level authorities (health, education, livelihood, social justice and empowerment departments and district legal service authority) would be advantageous in terms of availing timely different Government services by sensitizing other professionals on mental illness.

**Opportunities for scale-up**

The community-based psychosocial rehabilitation centers have over a period through their various activities shown significant improvement in psychiatric disabilities such as self-care, communication, interpersonal relationships, vocational activities, family relationships, and participation in community and leisure time activities. Therefore, community-based psychosocial rehabilitation can be seen as an eclectic rehabilitation model.
that integrates bio-medical, psycho-social and economic interventions. It is a dynamic model that can be altered and modified as per the requirement of the patients, demands of time and environment, obviously according to the socio-cultural background of the patients.

The outcome of community-based rehabilitation is empowering. It presents an opportunity to scale-up at the state level through the District Mental Health Programme. It can be linked with District Hospital with Psychiatric Units to expand its scope of service and reach. Furthermore, integrating the community-based psychosocial rehabilitation components into primary healthcare services (like health and wellness centers and primary health center) presents a strategic opportunity to overcome access barriers and reach the largest number of people. At the same time, it assists minimizing stigma and discrimination around mental illness.

It is arguable that systemic factors, such as high patient loads, lack of or limited availability of mental health professionals, management resistance to change, and most importantly, lack of training in rehabilitation, can act as impediments toward scaling up community-based psychosocial rehabilitation at Psychiatry Units at District Hospitals. Therefore, a public-private partnership of both government machinery and non-government sectors including Corporate Social Responsibility (CSR) grant would be an indispensable strategy for creating rehabilitation opportunities and resources. Furthermore, evidence on the effectiveness of self-help groups on the recovery of mental illness is promising. Self-help group of persons living with mental illness can be linked with Mission Managalam—a Gujarat State Government’s livelihood program through supporting self-help groups and collectives—and can explore potential of livelihood opportunities through newer ventures in the rural service sector.

As such, integrating a psychosocial rehabilitation into psychiatric services and its convergence with other government departments involve much more than attitudinal shifts among mental health professionals, health administrators, and managers. It demands multi-level systemic changes as well as including psychosocial rehabilitation in the mental health education curriculum.

Further studies on the recovery process, medication adherence, impact of mental health literacy of family and community, longitudinal studies on quality of life would help advance the knowledge and create evidence on the effectiveness of this program. Importantly feasibility of providing rehabilitation services by a community-based organization of persons living with mental illness need to be studied. Cost-effectiveness study of rehabilitation program would be valuable for creating evidence for decision-makers for scale-up at State and National level.

Authors have obtained approval from the Institutional Ethics Committee. Study participants were informed about study objectives and their voluntary participation in the study. Participants consent was obtained and measures were taken to keep their identities confidential.

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### Conflicts of interest
There are no conflicts of interest.

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