COMMUNITY PSYCHIATRY DURING PANDEMIC

COMMUNITY & PUBLIC PSYCHIATRY UNIT, DEPT OF PSYCHIATRY
NATIONAL INSTITUTE OF MENTAL HEALTH AND NEUROSCIENCE
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COMMUNITY PSYCHIATRY DURING PANDEMIC

A ready reckoner for postgraduate to ace community psychiatry

SECOND EDITION
2020

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Dedicated to the Department of Psychiatry, NIMHANS

And

Founding fathers of Community Psychiatry

FOREWORD

Community psychiatry encompasses wide ranging topics with vast array of issues and developments. The current viral pandemic has brought forward the need for strengthening community psychiatric services. It is indeed vital for psychiatry postgraduate residents to get robust training in community psychiatry.

It is a key domain for the examiners to assess resident's knowledge, particularly during objective structured clinical examination (OSCE) and viva-voce examinations. Newer initiatives under the National mental health programme, extended coverage of District mental health programs, innovative Taluk mental health programs, National Mental Health Policy, school/college awareness programs are indeed the way forward. Mental healthcare Act 2017 has directed the governments to provide mental healthcare for all and importantly community-based treatment.

National mental health survey, coordinated by our institute provided important insights about the lifetime and current prevalence of psychiatric disorders. The huge treatment gap identified by the survey could well be addressed by capacity building through training of our residents and trainees. With the introduction of Telemedicine practice guidelines - 2020, the era of digital psychiatry has begun and provides enormous potential with safe and improved accessibility. Thus, it becomes essential that residents are trained in digital platforms and its applications for use in community psychiatry. In accordance with the said context, Department of Psychiatry, particularly the Community Psychiatry team has compiled and updated the seminar series booklet that was released last year with added context of current pandemic and its implication in mental health. This updated book will surely guide and equip psychiatry post graduate residents to crack competitive exams.

More significantly, this book may also motivate the residents to consider community psychiatry as a career option and enhance the face of Public psychiatry.

Best wishes to the team and the readers.

Prof. Gururaj

Director

MESSAGE

Community psychiatry is a vast area for both enquiry and intervention. The seemingly infinite content may be somewhat overwhelming for entrants to psychiatry. A focused understanding of this discipline might help the resident to develop a basic foundation to understand the policies, programs, challenges and opportunities for service delivery in the community. Understanding and appreciating these issues are important not only from a knowledge perspective but to also generate innovative ideas to bridge the large treatment gap for mental illnesses. To transform a huge but seemingly tedious topic into a stimulating, simple, and an interesting one for a psychiatry trainee is a challenge for teachers in the area.

To address this concern, the community psychiatry team from the Department of Psychiatry at NIMHANS has come up with this updated version of the community psychiatry module. This second edition further adds the mental health perspectives of the ongoing viral pandemic and updates other chapters with recent progress in the field. Topics covered include epidemiology of psychiatric disorders, suicide, national mental health policy, programme, district and taluk mental health programs and interface of law, policy and community psychiatry. Further, new chapters are added on common mental disorders and community mental health perspectives from child psychiatry and geriatric psychiatry. The chapter on future of community psychiatry discusses the ongoing innovative programs in the community and Tele-psychiatry.

This is an attempt to take community psychiatry in a simplified form to the young psychiatry trainees. It is likely that the book may hence be not comprehensive enough to cover the entire field. However, the team believes the residents may benefit from reading this book. Feedback and constructive criticisms are welcome to further improve the content in future editions. The team also hope that this beginning may provide the initial impetus for the trainees to explore careers in this enterprising psychiatric field.

Prof. Pratima Murthy

Head, Department of Psychiatry

PREFACE

Community psychiatry in India has evolved as a discipline for more than five decades now. In describing this evolution as well as current approaches, this book tries to combine traditional concepts, such as community-based interventions and epidemiological perspectives, with newer concepts, such as primary care psychiatry, taluk mental health, & telepsychiatry which have shaped the field over the past decade. It is thus essential for any psychiatrist or any mental health professional to gain knowledge on this perspective, preferably during their training period. The book is divided into 13 chapters starting from the history & perspectives of community psychiatry and historical models of care like the Bellary Model developed by the National Institute of Mental Health And Neuro Sciences (NIMHANS) to the current models of care based on online training & treatment using telemedicine portal. Each chapter flows from those preceding it, providing a fluid overview of the subject in question. Additionally, each chapter has a small synopsis on what the chapter is going to describe. After the initial chapter, the book then leads the reader through a description of the epidemiological background and methods that have influenced current approaches to evidence-based practice in community psychiatry. This is followed by a thorough exploration of frequently used concepts such as 'health care model', 'capacity building etc.' The complex issues surrounding the planning and organization of community mental health services are clearly described, with reference to the balance that must be made between clinical ideals and logistic restraints.

One of the important goals is to make this book available to the final year psychiatry residents who are preparing for their exit exams. This book is organized in such a manner that each chapter can be viewed as a review article on that particular aspect of community psychiatry. It is also hoped that other mental professionals – psychologists, psychiatric social workers, & primary care physicians will be benefitted in understanding of the subject, the goals & the challenges in integrating & implementing health programs including mental health. The updated second edition further added new chapters on epidemiology of common mental disorders, suicide and included community mental health perspectives from child and geriatric psychiatry teams. The authors and the editors have made a collective effort to source, organize & compile the data available to lead the genesis of this booklet in a short time frame. As with any book or booklets with multiple authors, we had our own challenges in maintaining uniformity and quality of each chapters, which we overcame. It has been a rewarding experience. There are several books & print materials available on community psychiatry which covers various aspects of the subject in a more scholarly fashion dealing with multiple issues related to community mental health. We have tried to keep our focus on limited areas & which serves the immediate need of a post graduate resident.

We express a deep sense of gratitude to the institute authorities Prof BN Gangadhar, Prof SK Chaturvedi, Prof Satish Chandra Girimaji, Prof K Sekar, Prof Prabha S Chandra and Prof Pratima Murthy among many others for helping us in the endeavour. Special thanks to all the authors who came up with each chapter in a very limited time frame. We also extend our appreciation to all the staffs of the Telemedicine Centre of NIMHANS & the staffs of the office of the Department of Psychiatry who helped us in working out the logistic challenges that have cropped up in the compilation of this booklet.

No work is perfect & complete. We expect imperfections, errors & omissions in our booklet & we welcome all suggestions to help us improve & improvise in the next edition of this booklet.

Editors

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Chapter 1

Introduction to Community Psychiatry

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HIGHLIGHTS

- In countries such as ours, only minority of the psychiatric patients receive treatment. Majority of the patients approaching primary care physicians, family physicians and alternative complimentary medicine do not receive adequate psychiatric treatment.
- Based on various epidemiological studies, approximately 13 crore persons in India require professional help for their mental morbidity
- Unfortunately, resources for mental health care are extremely scarce in most low- and middle-income countries.
- The annual health expenditure of India is 1.15% of the Gross Domestic Product (GDP), and the mental health budget is less than 1% of India total health budget.
- To address this costly issue, India adopted National Mental Health Program (NMHP) to provide services at the doorsteps by integrating mental health care into the primary health care system

Definitions and Terminologies

The word '**community**' can have different meanings based on the context. In general, it denotes all the people who live in a particular area, country, etc. when talked about as a group or as a group of people who share the same religion, race, job, etc (1). In the context of "Community Psychiatry" community can be visualized as the geographical and administrative area outside the mental hospitals and institutions (2).

"Community Psychiatry" has been defined in many ways. In an over-arching approach, it can be considered as "any activity related to mental health that happens outside the premise of a mental hospital" (2).

The other closely related terms used, that are pertinent include "Social Psychiatry" "Community mental Health" "Preventive Psychiatry" "Public Health Psychiatry" and "Global Psychiatry".

Social Psychiatry

This is defined as an exploration of social systems and culture and their impact on psychiatric phenomena. The focus of Social Psychiatry is on research of the theoretical underpinnings of Community Psychiatry (3).

Community Mental Health

The term "Community Mental Health" is agreed upon to be broader and inclusive than that of Community Psychiatry. This term encompasses aspects of primary prevention and promotion of positive mental health in the community, which is a community-wide responsibility through social institutions concerned with health, welfare, employment, religion, education and legislation (4).

Preventive Psychiatry

The term is similar to community mental health, focussing on the primary prevention by programmes that aim at reducing the new incidences of mental illness (5). This includes early identification and interventions for "at risk" and susceptible population.

Public Health Psychiatry

When this term is used, the emphasis is on the "Public Health" with visualization of mental illnesses from public health perspective (6), as a social problem therefore requiring systematized social actions for treatment, in addition to relying on the traditional clinical care.

Global Mental Health

Global mental health involves the study, research, and practice of improving mental health for all people worldwide (7). It takes into consideration disparities in mental health treatment and care across different cultures and countries.

Comprehensive Community Mental Health

Though there is no clear-cut delineation amongst these different terminologies, the term **"Comprehensive Community Mental Health"** encompasses almost all the activities pertinent to providing Community Psychiatric Services (4).

Comprehensive because a complete range of services needs to be provided under a single roof/administration

Community because the approach is at grass root level, with patients being treated at their own community with close link between the service provider and receiver

Mental Health because the programme is inclusive of both direct treatment and other preventive approaches.

The 'principles' of Community Psychiatry, proposed by Caplan and Caplan (8) is helpful in defining the subject. These principles include:

1. Responsibility to a population, usually a catchment area defined geographically
2. Treatment close to the patient's home
3. Multi-disciplinary team approach
4. Continuity of care
5. Consumer participation
6. Comprehensive services

Need for Community Care

The patients from community settings differ from those of hospitals because of the following reasons (9):

a) Community samples contain patients who are usually mildly ill
b) They are not treatment seekers
c) Course and outcome are different from the population requiring hospitalization
d) Biological, occupational and social dysfunction associated with community samples may be different from those encountered in hospitals.

In countries such as ours, only minority of the psychiatric patients receive treatment. Majority of the patients approaching primary care physicians, family physicians and alternative complimentary medicine do not receive adequate psychiatric treatment. They receive non-specific treatments because the knowledge about mental health in these service providers is very poor. Religious and faith healers also contribute to this group (9). Therefore in case of mental illness the two broad pathways for care are:

1. Traditional and other complementary care systems; and
2. The medical (allopathic care) system.

The pyramids in these systems of care are depicted below:

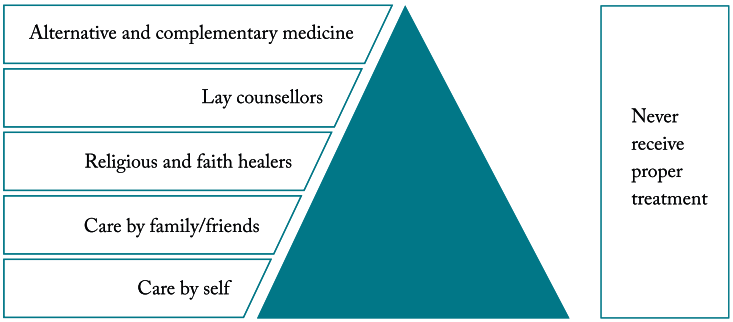

Figure 1: Pyramid for traditional and complementary care system

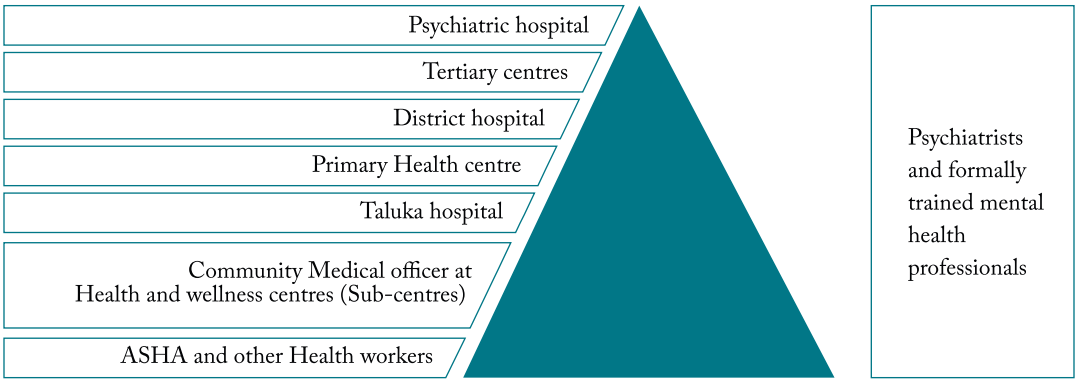

Figure 2: The pyramid for pathways to care in medical care system

There is a large group of population at the bottom of the pyramid who may not receive treatment at all. National Mental Health Survey (2014-16) reports a treatment gap of 80% (10). Reasons for this gap can be extremely complex and needs to be addressed urgently. In this background, a qualitative study done by Reddy and colleagues systematically studied the factors that kept rural community patients out of the treatment net (11). Some of the reasons are as follows:

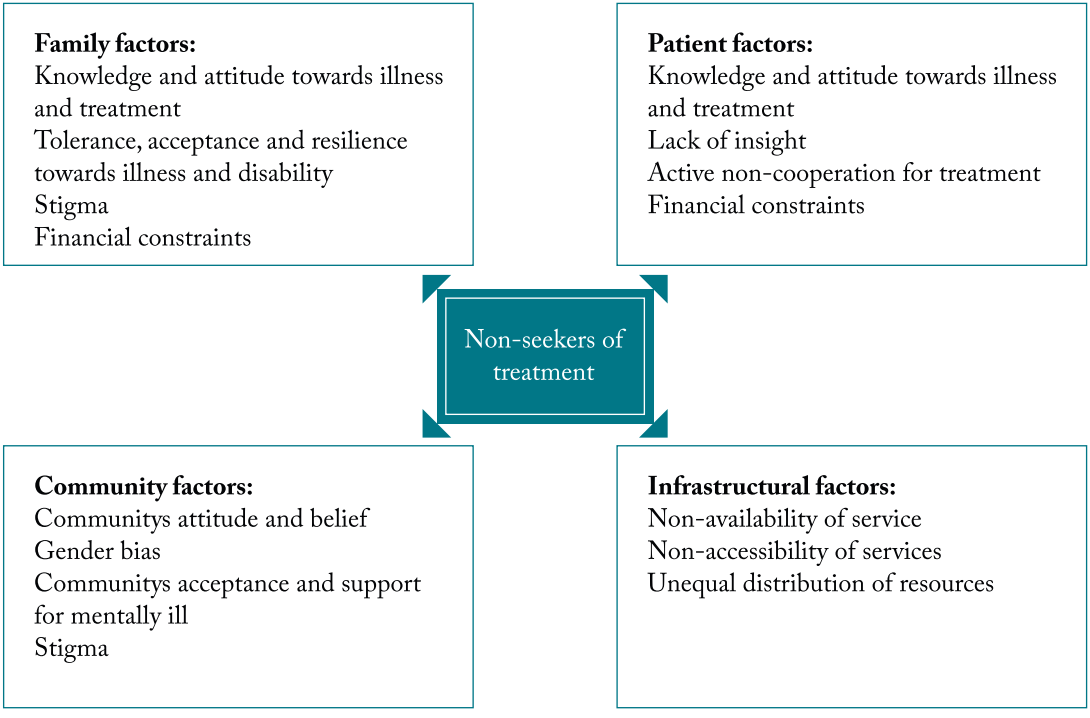

Figure 3: Factors for non-seeking of treatment for mental illness in the community

Need for epidemiological research

Across the globe, community sampling is advocated in order to get a complete and comprehensive understanding of morbidity experiences. In the community survey approach, each member of the study sample is individually investigated to accurately classify his/her disease status. These types of studies may be accurate when compared to hospital sampling studies but are difficult to conduct and requires huge amount of resources. Providing accurate prevalence data on mental disorders though essential in policy making and providing care in the community, one needs to keep in mind the variability of the prevalence rates both within the community over time and also across communities during the same time. The psychiatric epidemiology of India is discussed and elaborated in the respective chapters of the booklet.

Economic cost incurred by a Person with Mental Illness for treatment

Based on various epidemiological studies, approximately 13 crore persons in India require professional help for their mental morbidity (12). If we consider that each patient requires 1000 Rs per month for his/her mental health care (including medication costs, consultation fees and cost for travelling for consultation), the approximate cost required per month will be a mind-boggling Rs 13,000 crores per month and Rs 1,56,000 crore per annum.

Table 1-1: Conservative estimate of expenditure incurred by a Person with Mental Illness for treatment

Mental health care for an individual (out of pocket expenditure)	Cost per month
• Medication cost per month for an individual suffering from mental illness	Rs. 300
• Travelling cost to meet the mental health professionals	Rs. 100
• Doctors fees (mental health professionals)	Rs. 200
• Loss of daily wages (for two people)	Rs. 300
• Miscellaneous expenditure during travel (such as food, water, etc)	Rs.100
Total	**Rs. 1000**
Cost for mental health care for the whole country	**Cost per month**
Considering 13crore population requires professional help (total cost=13Crores X1000)	Rs 13000Crores
Total	**Rs 1,56,000Crores**

Unfortunately, resources for mental health care are extremely scarce in most low- and middle-income countries (13). The annual health expenditure of India is 1.15% of the Gross Domestic Product (GDP), and the mental health budget is less than 1% of India total health budget (14). To address this costly issue, India adopted National Mental Health Program (NMHP) to provide services at the doorsteps by integrating mental health care into the primary health care system (15).

Most mental illness needs maintenance treatment for very long duration that could range from several months to years & even life-long. Untreated illness for a long duration may add the chronicity of the illness. The indirect costs in terms of loss of wages, absenteeism, substance use, violence related losses and disability is unimaginable. The family social isolation, stress, care-giver burden, discrimination and poor quality of life add to the indirect cost (16).

Scope of Community Psychiatry

Community psychiatry is based on the premise that person with mental illness can be economically and effectively treated in their local environment using the community resources rather than in a mental hospital (17). This model of approach is cost-effective, reduces stigma and provides an excellent opportunity to the community members in raising awareness and also patients get integrated back to the community at the earliest. If the treatment is made available within the community it would help family members seek early treatment, which plays a crucial role in outcome of the illness. Community psychiatry is easily accessible and affordable.

However, in order to fill the lacunae in the delivery of psychiatric services, it is necessary to be aware of the multiple forces that exists at all socio-ecological levels (individual, interpersonal, community and policy level) that promote or obstruct mental health (18).

Therefore, the scope of Community Psychiatry stretches beyond the routine clinical care of patients to include the following:

- Mental health promotion/prevention
- IEC activities to promote awareness
- Capacity building: training of personnel in the community
- Task shifting- to ensure delivery of services to the needed population
- Monitoring of the services
- Addressing psycho-social issues prevalent in the community including homelessness, criminal justice and disability related issues
- Avenues for rehabilitative services for the needed
- Networking : inter-sectoral coordination to address psycho-social issues, vocational rehabilitation etc
- Collaborative care in liaison with other medical specialities, NGOs in the field of mental

health, social justice and empowerment.

- Empowerment of the community in terms of caring for mentally ill in their respective community.

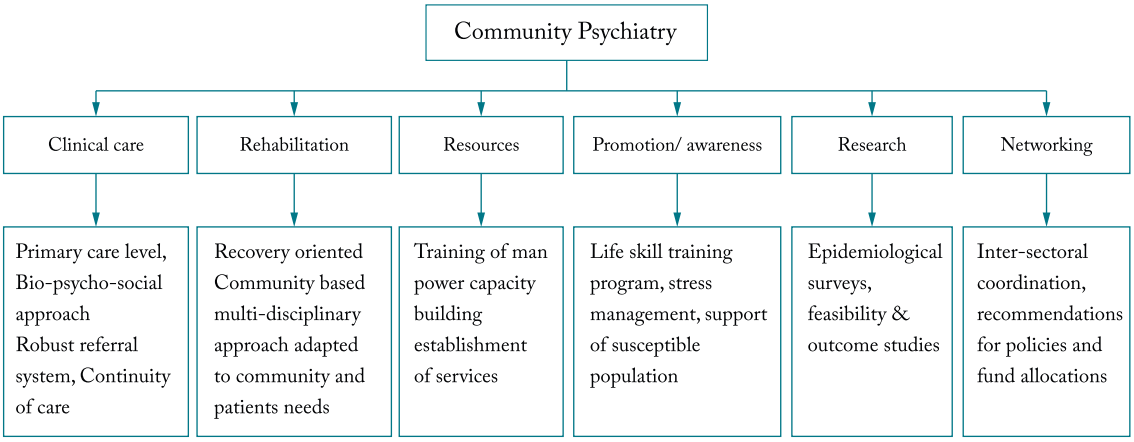

Figure 4: Scope of Community Psychiatry

Community Mental Health: Evolution and Models of Interventions

As we understand the purview of community psychiatry and need for community based approach, this section will give an overview of evolution of community psychiatry over the years across the globe and in India. The various community intervention models have been elucidated in this section.

Historical Background

The history of evolution of mental institutes and the delivery of care is important to understand the evolution of Psychiatry into its current status. The presence of mental asylums can be traced back to as early as to 4th century AD with establishment of institute solely for mentally ill in Byzantium and Jerusalem. The first major modern mental hospital to be established was the Bethlem hospital in London in 1247 (19). These establishments primarily targeted isolating the mentally ill from the community in order to provide protection, shelter and treatment. In India, the earliest mental hospitals to be established were in the pre-independence era, with first 'asylum' built at Mumbai in 1745, with continuation in growth of hospitals in the post-independence era (20).

Deinstitutionalization movement

The mid-part of last century saw the shift of focus from developing mental institutions to delivery of

care in the community. The deinstitutionalization was initiated by factors such as

a) Socio-political movement for community mental health services and open hospitals
b) Advent of psychotropic medications
c) Financial reallocation (especially in USA with announcement of Comprehensive Community Mental Health Centres construction plan)

The discharge of chronic patients from the state hospitals into the society made apparent the gross deficiency in the society in terms of mental health services (21). This compounded by social exclusion, marginalization and stigma against mentally ill made it difficult for such patients to readjust in the community. This led to many unforeseen consequences such as homelessness, the tendency for many chronic patients to become drifters, and the shunting of many of the mentally ill into the criminal justice system. In addition to realization of harm of "instutionalization syndrome", lack of beds in institutions with expanding needs for manpower and infrastructure, the realization that general health workers and para-professional workers can be trained to provide the services within the community of the patients led to development of formal community psychiatric services (22).

The response to decline of asylums and deinstitutionalization was characterized by the following essential components such as:

- Preventing inappropriate mental hospital admissions by providing community facilities;
- Discharging long-term institutional patients into the community;
- Establishing and maintaining community support systems for patients who are not institutionalized.

The current principles of mental health care focused on ***balanced care*** which is essentially a community-based service but hospitals play an important backup role (23). The balanced care approach seeks to provide services that:

- are close to home, including modern hospitals for acute admissions and long-term residential facilities in the community;
- are mobile, including services that provide home treatment;
- address disabilities as well as symptoms;
- provide treatment and care specific to the diagnosis and needs of each individual;
- adhere to international conventions on human rights;
- reflect the priorities of the service users themselves; and
- are coordinated among mental health care providers and agencies.

The components of community mental health services

The various sectors of community mental health services have to work in an integrated manner

rather than segmental manner for effective and coordinated delivery of mental health care. The elements of the community mental health services may vary from country to country depending on the resources availability and allocation. However, the WHO recommends primary care mental health with specialist back up in low-resource countries and additional ambulatory clinics, Community Mental Health Teams, long-term residential care and rehabilitative services in medium resource setting countries. In high resource countries the specialized services and alternative acute care, residential care and rehabilitative services are recommended (24). The details of each of the services are enlisted briefly below.

Primary mental healthcare

Most people with mental illness presents to the primary care physician with or without co-occurring physical symptoms. The average prevalence of well-defined psychiatric disorders presenting at primary care level across the world is 24% and are associated with significant burden for society. WHO reports shows it is possible and feasible to integrate mental health treatment with primary health care settings even in low and middle income countries (25). **Primary mental health with specialist back up** is a model in which the specialist is involved in training, consultations in complex cases and in-patient assessment and treatment in cases which cannot be managed at primary care setting.

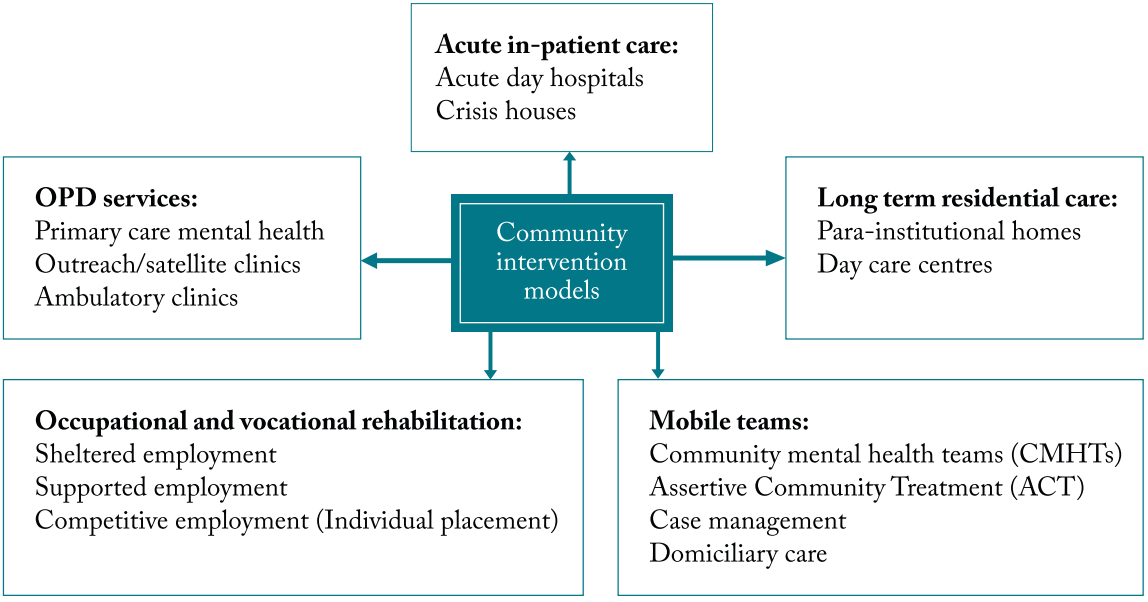

Figure 5: Overview of various community intervention models

Outpatient/ambulatory clinics

These clinics can be seen as clinical services, in settings such as primary care health centres, general hospitals and community mental health centres, where a trained mental health staff offers assessment and treatment, including pharmacological, psychological and social interventions. These models are relatively efficient way to assess and treat mental health conditions, provided that the sites are accessible to local populations.

Community Mental Health Care Teams (CMHTs)

The CMHTs are considered as the basic building blocks of community mental health services in most of the high resource countries. The CMHTs can be generic i.e., non-specialized, wherein within a defined catchment area they provide a full range of psychiatric services with higher priority to severe mental illnesses. Evidences from United Kingdom shows such non-specialized CMHTs by community based multi-disciplinary teams are a cost-effective and feasible approach (27).

Specialized community mental health care teams (CMHTs)

Specialized CMHTs are by far the most researched component of balanced care, and most recent randomized controlled trials and systematic reviews in this field report of effectiveness of this approach (28). Two types have been particularly well developed as adjuncts to generic CMHTs: Assertive Community Treatment (ACT) teams and early intervention teams.

Assertive Community Treatment (ACT)

The ACT teams are mobile units specialized for outreach of people with severe mental disorders (29). They have been characterized by several defining features such as:

- a smaller case load
- continuous service availability as operating 24 hours a day and 7 days of the week
- a team approach consisting of Psychiatrist, Psychiatric nurse, Psychologist and other mental health professionals
- delivery of medications as needed
- providing financial and housing support as needed

The ACT teams generally work with a target of having 80% of team activity to happen in the community. This approach has shown reduction in in-patient admissions, improvement in accommodation, occupation and satisfaction of the patients. However, in low and middle income countries, the relevance, appropriateness, feasibility and evidence for efficacy are yet to be established (30). Also, in countries with prior high quality of continuity of care, ACT may not have any added advantage (31).

Early Intervention Teams

There has been considerable interest in recent years in the prompt identification and treatment of initial or early psychotic episodes (32). Much of the research in this field has focused upon the time between the first clear onset of symptoms and the beginning of contact with treatment services, referred to as the "duration of untreated psychosis" (DUP).

Case Management

It is the coordination, integration and allocation of individualized care for persons with mental illness, which includes ongoing contact with one or more, identified key personnel. These units provide education, crisis intervention, support, needs assessments, personalized service plans such as money management, assistance in daily living, consumer advocacy and facilitate individuals' access to psychiatric care including emergency care. Current evidences suggest that it is most useful to provide case management through the CMHTs (33).

Long-term community based residential care

Provision for a residential care in the community is a direct substitute to long term hospitalization. The various residential care models provide graded levels of support to mentally ill persons who are unable to live independently without any assistance. The different forms of residential care fall into three main categories:

1. 24-hour staffed residential care – well-staffed hostels, residential care homes or nursing homes (the difference being the staff's professional qualifications);
2. day-staffed residential places – hostels or residential homes served by a staff that works fixed hours, several days a week;
3. Accommodation with lower levels of staff support – minimally supported hostels or residential homes with visiting staff, including self-contained flats with at least one staff member on call in separate accommodations

Occupational rehabilitation and day care

Traditional methods of vocational rehabilitation include various day care models and community based rehabilitation services. The traditional model uses a "train and place" approach, offering individuals training in sheltered workshops and later placing them in real-life work settings. The current focus for having improved psychosocial outcomes and recovery includes various **supported employment models** (34)**.** These models centre on rapid placement in competitive jobs and support from employment specialists. The individual placement and support (IPS) model emphasizes competitive employment in integrated work settings with follow-up support, bypassing the traditional stepwise approaches to vocational rehabilitation

Alternatives to acute-inpatient care

In recent years, three main alternatives to acute inpatient care have been developed.

***Acute day hospitals*:** these are facilities that provide day treatments for those with acute and severe mental disorder as an alternative to in-patient admission.

Crisis houses: these are houses in community settings that are staffed by mental health care professionals and offer admission to some patients who would otherwise need inpatient care because of acute and severe mental health conditions. A special type of crisis house model for psychotic patients in United States, called as the Soteria model has shown evidence to be effective when compared to routine in-patient care (35).

***Home treatment/crisis resolution teams*:** care here is provided by the mobile CMHT units who visit the patient at their home during a crisis and provide intensive treatment and care at home to avoid hospitalization.

Community Support Groups

It consists of family support groups, spouse support group, self-help groups and voluntary lay counsellor's groups and so forth, enables the group in net-working, crisis management, socialization, recreational, advocacy and educational activities of the mentally ill. Such support groups help care-givers to come together, share their experiences, learn from each other and plan to net-work better for the welfare of the mentally ill. At times, combination of the above services isprovided by the group of trained professionals after liaising with the local leaders of the community.

Community Mental Health: Indian Perspective

Historical background

Pre asylum era

In India, evidences for traditional Indian medical and religious approach for treating mental illnesses can be traced as far as 1500 BC. The vedic texts descriptions of illnesses indicates presence of magic-healers differentiated from physicians of those times for treatment of insanity. Since that time, community had been involved in care of mentally ill persons in our country. Family members, traditional medical practitioners, religious and faith healers had been taking care of mentally ill people. Since the earliest times until today, religious places such as temples and durghas remain to be important venues for treatment of mentally ill (36).

Pre independence era

The **mental hospitals** or asylums in India were built only during the British colonial period. The

mental hospitals in India were built in the 18th century with the earliest hospitals built at Mumbai, Calcutta and Chennai (37). This established the formal mental health care in India and increase in number of mental hospitals continued in the post independence era too. Even during the phase of expansion of mental hospitals, a community based approach co-existed in our country. As early as 1946, The Bhore Committee Report laid the foundation for the community health movement by recognizing community mental health as integral part of "community orientation to medical services and medical education" much before some of the noted western movements of community mental health (38).

Post-independence era

Establishment of **General hospital Psychiatry Units** which began in 1930s and saw an expansion throughout most parts of our country by 1960s. This psychiatric service was pivotal for people with minor ailments and psychosomatic illnesses to seek treatment and these units were less stigmatizing than the older asylums and shelters (39).

The inclusion of family wards which makes admission with a family member mandatory, initiated by Dr. Vidyasagar at Amristar in 1957 soon followed by similar approaches in CMC, Vellore and NIMHANS Bengaluru were important milestones in the evolution of psychiatric care in our country.

The growth of community psychiatry

The 1960s and 1970s saw the growth of community based approach in the treatment for mental illnesses. The mental health camps, rural mental health programmes by NIMHANS and other premiere institutes were initiated during this phase. The first specially designated community mental health unit in India was created at the Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore during the mid-1970s which developed a strategy for integrating basic mental health care with the existing general health care services in India (40). Similar experimentation was done in Raipur Rani District of Haryana (41).

National Mental Health Program (NMHP)

The growth of community based approaches culminated in the formulation of National Mental Health Program of 1982 (42). The National Mental Health Policy is one of the earliest nationwide policies emphasizing the community based approach for psychiatric care. The idea of developing National Programmes of Mental Health started with World Health Organization (WHO), Mental Health Division's emphasis on "organization of mental health services in developing countries" which led on the development of a project "Strategies for Extending Mental Health Care (1975–1981)" to implement primary mental health care services in developing countries (43). The

three broad objectives of the NMHP were:

- To ensure availability and accessibility of minimum mental health care for all in the foreseeable future, particularly to the most vulnerable and underprivileged of the population;
- To encourage application of mental health knowledge in general health care and in social development; and
- To promote community participation in mental health services development and to stimulate effort toward self-help in the community

District Mental Health Program (DMHP)

DMHP aims to achieve the goals and objectives of the National Mental Health Program (NMHP). The DMHP was started based on the successful model demonstrated in Bellary district of Karnataka state in 1985 (44). The Government of India has now operationalized DMHP in 518 districts of the country and envisages extending this program to all districts of the country in the coming years (45). The objectives of the DMHP include:

- Provision of mental health care in the community would essential require integrating mental health services into the primary health centers. Primary care physicians play a crucial role in delivering services.
- To launch extensive information and communication activities about the nature, course and the availability of treatment for mental disorders
- To facilitate adequate psychosocial care of the recovered mentally ill in the community by making linkages with non-governmental organizations locally
- Initiate mental health promotional activities in schools and colleges
- To develop active public-private partnerships

Over a period of time, the NMHP has progressed and have incorporated many innovative approaches. The salient features of the NMHP include:

District Mental Health Program which is now a time-tested approach of delivering psychiatric service to entire district by integration of mental health to primary health care. Addition of Taluka Mental Health Program, Urban Mental Health Program and Adolescent Mental Health Program are additions to the DMHP.

Preparatory Phase in which each state maps the mental health resources in both public and private sector before launching of the program.

Improvement in man power in the form of increasing the number of regional institutes and centres of excellence, with increased fund allocation to train mental health professionals.

School and college mental health program: This involves health promotion through life skills education for development of psycho-social competence. This model, using teachers as trained resource staff, has been approved as an accepted strategy internationally in both developing and developed countries

IEC activities in the form of public awareness materials and programme in mass media and training materials in the form of interactive digital platforms.

Public-Private-Partnership: This is a key concept. Efforts of government alone are inadequate to realize all the goals of NMHP. Appropriate linkages between NGO activities as well as NMHP components by matching them can increase efficiency. A substantial part of the NMHP can be contracted to well-established NGOs/private bodies. NGOs can be involved in spreading awareness about mental disorders, organization of self-help groups, day care centers, support for families and conduct of mental health camps.

Suicide prevention: Suicide is a growing cause of premature mortality. The causes include psychiatric disorders as well as socioeconomic reasons. Recognition of any underlying psychiatric disorder and early treatment has the potential to prevent suicide. Several vulnerable populations require life skills training and/or counselling to prevent suicides – school and college populations are two examples. Varied social factors need to be addressed that are regionally relevant. Several other sectors have to be linked for networking resources for suicide prevention. Special IEC activities will target specific populations. Each state's nodal officer will be responsible in implementing suicide prevention programme in the chosen districts.

Monitoring of the implementation of DMHP in the country is very critical to plan mid-course correction. It is proposed that a central and state level monitoring committee be formed to monitor the DMHP on a monthly basis.

Research activities in the domains of outcome of mental disorder treatment in primary care setting, psychological and social factors of mental illnesses, early intervention programme etc

More details regarding the NMHP and DMHP activities will be covered in the respective chapter of this booklet.

The community intervention models in India

The general principles of the various models for community interventions will be similar to the interventions listed above as components of community intervention models across the globe. The term/names used might be slightly different with adaptation of the models to our Indian setting.

Integration of mental health to primary health care

Through the DMHP programme, this has been possible. The innovations in training of primary health officers continue to evolve, with current examples being use of tele-psychiatric services to train the doctors, real time in their clinics. The Karnataka Tele-Monitoring Program (KTM) is one such example. The training of all cadres of health workers through training modules is an continuous and on-going process. The Comprehensive Primary Mental Health Care now aims at having a trained Community Medical Officer at the level of Health and Wellness centres (Sub-centres) in every district across the country. The principle being the mental health professional will have robust training in identifying, screening and assessing mental health disorders and manage minor ailments and refer the other disorders appropriately.

Satellite clinics (outreach clinics)

Many of the teaching hospitals in our country have outreach clinics to reach out to patients who cannot reach hospital based facilities. These clinics are generally run on a weekly or monthly basis at district or taluka level. Local volunteers and NGOs are motivated to be the host and help in patient care.

Domiciliary care Program

Mental Health programs that deliver mental health services by case management approach at client's door-step have been done on an experimental basis, primarily in limited localities and by providing pharmacological treatment only (46). Many of the NGOs and few DMHP services include home visits and evidences from those interventions show that compliance, clinical outcome and disability of severe mental disorders improve with such Care-At Doorstep approach. While planning for home based treatment options, it is necessary to adequately train the staff involved. Training should include identification of symptoms, ability to judge worsening /improvement of symptoms, identify treatment related side effects, motivating patients for compliance and addressing family concerns including stigma associated with mental illness. Training of Accredited Social Health Activist (ASHA), Village Health Nurses and other Health care workers for this purpose is a feasible option, yet to be fully utilized.

Para-institutional Care (Half Way Home and Day Care Centre)

A Half Way Home (HWH) is a rehabilitation facility for individuals such as patient with mental illness or substance abusers, who no longer require the complete facilities of a hospital or other institution, but who are not yet prepared to return to their communities. HWH assist persons who have left highly structured institutions to adjust to society in order to re-enter it and live within its own accepted norms. The intervention provided are those that improve skills, improve

interpersonal communication and provide vocational training (47). The Mental Health Care Act of 2017 mandates on establishing such community based care centres and day care centres in every district.

Helpline services

Helpline services are basically the provision of telephone services to assist and guide people regarding health related issues. Helpline programs related to Psychiatry include Suicide Prevention Helpline, Smoking Cessation Helpline, and Child Helpline etc. Calls to the help lines are initiated by the client and are available round the clock. Helpline services usually offer counselling (psychological first aid) provided either by trained volunteers or by trained psychotherapists in crisis situation. Some helpline centers also follow-up with clients that have called (call-back) to know if further help is required or direct them to appropriate services. Some of the suicide helpline available in India are: Sneha (Chennai), Aasra (Navi Mumbai),Samaritans Sahara (Kolkata), Aasha (Chandigarh). Recently the Ministry of Social Justice and Empowerment has launched the first national mental health helpline called "Kiran".

Training of Personnel

The governmental programme and NGOs have focussed on various programmes to sensitize the public about mental illnesses. For this purpose, many of professionals from other fields have been trained in the field of mental health regarding awareness, recognition and management of psychosocial issues and psychological distress. These training includes, training of

- Training of school teachers, college faculty and student volunteers through the school and college mental health programme
- Training of volunteers to be Gate-keepers for suicide prevention
- Involvement of ICDS personnel in child mental health care
- Training of village leaders
- Training of volunteers in the community to be Lay counsellors

Non Governmental Organizations

Many NGOs work in the field of mental health. Schizophrenia Research Foundation (SCARF), Chennai and Sangath, Goa have developed community intervention models for psychiatric disorders (48). The Community Based Rehabilitation (CBR) both in urban and rural areas and tele-psychiatric service model (STEP) have been developed by SCARF in selected districts of Tamil Nadu (49). Similarly, Sangath Goa has Manas program for depression (50), "DIL" protocol for geriatric depression, COPSI (Community care of People with Schizophrenia), Sundar (Mental Health for all by all) are some of the models of community interventions for mental illnesses (51).

Most of the models follow a general principle of reaching the unreached population by (52):

- Training of community volunteer workers for screening, identifying mental disorders and simple techniques of rehabilitation
- Establishment of mental health clinics in the catchment area, mostly as periodic camps
- Increasing awareness among general public
- Use of local resources for vocational rehabilitation, with co-involvement of family member in training, to improve sustainability of the model
- Networking with other medical and developmental organizations, which is crucial for resource mobilization for community based rehabilitation.

Few other examples for NGOs include Medico Pastoral Association, Richmond Fellowship Society of India in Bengaluru, involved in providing rehabilitative services. Mental Health Action Trust (MHAT), Calicut has community volunteers based psychiatric services extending to include the tribal population in mental health care. Sneha in Chennai, Helping Hand in Bengaluru, Sanjivini and Sumaithri in New Delhi are some of the NGOs working in the field of suicide prevention.

Religious and Faith Healers

Services provided by faith healing groups are neither standardised nor scientific, and vary considerably in the intervention provided. The interventions include blood-letting, exorcism, removal of insects from the head, prescribing amulets, extortion, oblation (bali) and many other such procedures. Though not exactly a model in community Psychiatry, still they may have an important role to play. This group possibly attracts less stigma compared to mental health services and may be regarded as easily accessible.

The World Health Organisation (WHO) has long advocated local level policy of close collaboration between the conventional health system and traditional medicine, particularly between individual health professionals and traditional practitioners. The "Dava-Dua" programme (53), psychiatric opd clinic inside the premises of dhurqa at Erwadi, Tamil Nadu are examples of such collaborative care adapted to the local needs.

Contributions from Research towards the development of Community Psychiatry in India

Research in community psychiatry has dealt with a number of issues such as models for mental health care delivery in rural community, course and outcome of severe mental disorders, evaluation of the district mental health programs, community based rehabilitation (CBR) approaches, training, evaluation of various screening tools and telemedicine approaches. While doing so, the authors have focused on studies on severe mental disorders as they are the most burdensome and consequently have received largest research attention. This doesn't in any way mean that other disorders are any less important. Elegant studies for example have been done in communities on

suicide, alcohol use disorders, disability, life skills, high-risk groups, disaster and so forth. Hence, keeping in mind the constraints of space and time, only selective review of studies are done Chandrashekar and his colleagues in (1981) (54) showed that severe mental disorders can be detected and managed in homes if the doctor and health worker team of primary health centers (PHCs) are sufficiently trained and if persistent efforts are put in to make patients accept long term regular medications. A community outreach program providing psychotropic medications and basic psychosocial support can be effective in improving a host of outcomes in patients with untreated schizophrenia including disability, symptom severity, family burden and functioning (55). Recent studies not only have investigated clinical outcomes and functional outcomes from clinician perspective but also from the patient and care-givers perspectives. Both patient and care-givers groups desired, controlling symptoms, education and employment, social functioning, desirable activity of daily living, independent functioning, retained cognitive ability, fulfilment of duties and responsibilities, management without medication, reduced side-effects of medications, and self-determination as their desired outcomes (56).

In the past decade, innovative community intervention programs are underway in two rural taluks of Thirthahalli (Community Intervention for Psychotic Disorders CoInPsyD) and Turuvekere **(Treating the Untreated Psychosis in Rural Community: Variation in the experience of care, TURUVECARE)** of Karnataka state. The aims of these programs are to identify, treat and follow-up all patients with schizophrenia. The key-informant method is employed for case-identification. Though psychiatrists are involved in confirming the diagnosis, their role is limited in the overall care of patients as they visit these sites only periodically. Social workers are involved in coordinating the entire program by taking part in each and every step of the program. In a way, one social worker is responsible for the care of most patients with schizophrenia of the entire taluk. Psychotropic medications is being provided free of cost. Basic psycho-education about the nature and course of severe mental disorders and need for long term medications are being provided on a regular basis (57). Studies that have emanated from these intervention programs have given results of considerable public health significance. For example, those patients on regular medications had significantly less disability when compared to those who were not taking antipsychotic medications (58). Adhering to antipsychotic medications alone in the community can result in considerable reduction of disability and also enhanced work performance (59, 60)

Regarding Community Based Rehabilitation (CBR) approaches, there have been two elegant studies which have shown that even for severe mental disorders, CBR could be feasible and successful and better than routine out-patient care. Chatterjee and his colleagues in their study (2003), showed that within the CBR group, compliant participants had significantly better outcomes

compared with partially compliant or non-complaint participants(61). Another study by the same group showed that disability levels reduce to very low levels after four years of follow-up among those who engaged actively in the CBR program (62).

Challenges and Future Directions

Despite the evidences shown by the various community intervention projects through various DHMP programme and NGOs, there continues to be problems in expansion of these programme to large scale programme as nationwide system.

Thara and her colleagues in 2005, re-evaluated the status of Community Based Rehabilitation in rural region after a decade of withdrawing their active involvement (63). Of the 185 patients followed up, only 15% had continued treatment, 35% had stopped treatment, 21% had died, 12% had wandered away from home and 17% were untraceable. Of the patients who had discontinued treatment 75% were acutely psychotic. The support groups functioned without their supervision only for one year. They opine that community based initiatives in the management of mental disorders however well intentioned will not be sustainable unless the family and the community are involved in the intervention program with support being provided regularly by mental health professionals.

Therefore, in a highly populated country like ours with majority of population living in the rural communities, sustainability of community based interventions remains to be a challenging herculean task.

Some of the Barriers in successfully implementing mental health services at the community level include following:

- lower priority and funding in comparison with physical
- the stigma associated with mental disorders results in failure to seek appropriate care;
- lack of trained man-power to be available consistently in the region For example the medical officers in PHCs generally hold the position for six months to one year and hence recurrent training of newly recruited officers becomes necessary.
- scarcity of public-health perspectives in mental health leadership
- lack of consumer movements
- vertical nature of community health programs with different programs competing for the health worker's time and expertise

There is still a scope to improve mental health care delivery in the community by:

- Restructuring medical and nursing education into skills based courses
- Revamping of psychiatric training by enabling professionals to recognize and manage psychiatric disorders at the primary health care level
- Revitalizing primary care by strengthening the general health infrastructure

- Generation of political will towards organization of mental health care, shifting the immediate goal to be restricted to the identification and treatment of priority disorders (psychoses, depression and substance use disorders)
- Bridging mental health issues with existing public health priorities by integrating community psychiatry to the field of community medicine
- Seeking active co-operation from private health systems and traditional health system workers, faith-healers etc
- Overcoming resistance to decentralization of resources and development of community mental health services with continuous support for primary health care workers and
- Harnessing all available media resources to enhance awareness regarding mental disorders and their treatment

Role of Tele-Psychiatry

In contemporary world, the role of tele-psychiatry has been widely discussed in community psychiatry and can play a crucial role in reaching the unreached (64). Thara (2013) gives glimpses of a mobile tele-psychiatry unit in the Tamil Nadu state (65). The services are provided on a custom-built bus that contains a consultation room and a pharmacy. The communication takes place between the patient/care-givers inside the bus and the mental health professional elsewhere. The program has largely been successful and has demonstrated the feasibility of service delivery. The author concludes by stating that with the recent advances in telecommunication facilities in India, this could be the ideal time to exploit the immense potential of tele-psychiatry. However, tele-medicine has disadvantages also. This is exemplified by a study by Holla and his colleagues (66). They described the utilization pattern and challenges of the telemedicine network project of the Karnataka state. They reported that though services were operational in 25 district hospitals, its utilization was not optimal: quality of satellite connection was acceptable in 18 (72%) center. Tele-consultation advices from nodal centers were carried out completely in only 9 (36%) centers. Only in 13 (52%) client centers, did doctors keep up with appointment regularly. All technicians reported that the training they received was inadequate. 16 (64%) technicians were asked to do works that were not pertaining to telemedicine. The researchers concluded that the service is largely underutilized and has failed to deliver the promise. Tele-medicine approach if properly implemented can cut down the cost and can inject much needed support to community psychiatry services (67, 68).

In conclusion, community care of persons with mental illness has moved a long way from the institution to community settings. This has been possible because of the commitment on the part of the Government, professionals, institutional policies and legislations. Community is not a cheap alternative to hospital but a realistic alternative to fill the wide treatment gaps that exists.

Community care has been accepted as the most suitable and realistic alternative. Treating patients at their doorsteps is cost-effective, can reduce stigma and can provide an excellent opportunity to community to raise awareness. Taking basic and free mental health care to the doorstep of every member in our society will realize the vision of Health as a Fundamental Right. However, while doing so it is important to remember the possible ethical issues such as patient's confidentiality, consent and disclosure can arise during any stage of intervention. Hence the principles of ethics such as autonomy, justice, non-maleficence have to be integral part of any of the community interventions that are planned.

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Chapter 2

Psychiatric disorders Epidemiology in India – Recent Updates

Rahul Patley, Dinakaran Damodharan, Suresh Bada Math

HIGHLIGHTS

- Epidemiology deals with disease/disorder, distribution and frequency of disease/disorder, determinants of disease/disorder, human population and methods employed to control the occurrence of illness.
- The variation in the prevalence rates of mental illness is not specific to Indian studies but also seen with International epidemiological studies
- Most of the community based Indian epidemiological studies are on point prevalence, with varying prevalence rates, ranging from 9.5 to 102 per 1000 population.
- The National Mental Health Survey (NMHS) is a milestone in understanding the epidemiology of mental disorders in the country. According to this, for any mental morbidity lifetime prevalence is 13.7% and current prevalnece10.6%. The treatment gap for mental disorders ranged between 70% and 92% across different disorders.
- According to Global Burden of Diseases (GBD) study, the contribution of mental disorders to the total disease burden in India has almost doubled since 1990 and depressive disorders contributed the most to burden.
- Incidence studies of childhood psychiatric disorders in the community setting reported the rate ranging between 18-37/1000/year.
- Increase in systemic studies for vulnerable population especially disaster survivors is the need of the hour to tackle the mental health crisis.

The term Epidemiology means "study on human beings". Psychiatric epidemiology is a subfield of epidemiology which involves study of the distribution and determinants of mental illness frequency in human being with the fundamental aim to understand and control the occurrence of mental illness. Morris described the seven purposes of epidemiology. These are: (i) understanding the magnitude of the mental disorders; (ii) the causative factors; (iii) calculating the morbid risk; (iv) monitoring the historical trends; (v) completion of clinical picture; (vi) identification of new syndromes; and (vii) treatment utilization in the community.

Psychiatric epidemiology lags behind others branches of epidemiology as majority of the psychiatry illness have no known specific causes and there is interplay of genetic, biological, social, cultural factors etc with many precipitating, triggering and operational factors. Along with these, the following factors also contribute: difficulties encountered in conceptualizing, defining a case and diagnosing, sampling technique, lack of trained manpower, poor knowledge, collecting data from single informant, systematic underreporting, stigma, lack of adequate funding and low priority of mental health in health policy. Despite these challenges, there has been studies in descriptive epidemiology, which have provided us the point prevalence of mental illness in the community. Descriptive community epidemiological studies can be useful in producing information about internal consistency, taxonicity, family aggregation, and other things that can be used to help make clinical decisions about the definition of a case and also can provide useful information about the implications of alternative decisions on how to define a case with regard to changes in prevalence and correlates. However, due to methodological differences, many of the researchers had their reservation about comparison of these studies. These varying prevalence rates of mental illness are not specific to Indian studies but are also seen in International studies like the Epidemiological Catchment Area Program and the National Comorbidity Survey. This has significant impact on the planning, resource allocation and mental health care delivery. The discrepancies in the prevalence of mental illness in various studies has confused the policy makers and had impacted mental health funding.

Providing accurate data about the prevalence of mental disorders is essential in policy making. This chapter attempts to

a) Critically evaluate the (overall) prevalence rate of psychiatric disorders as reported in epidemiological studies from India,

b) What is the accurate prevalence of psychiatric disorders?

c) Is the prevalence of psychiatric disorders reported in India is similar to other international studies?

d) Does the prevalence rate of psychiatric disorders is stable or changing?

e) Are there any population subgroups which are at high risk of developing mental illness?

The prevalence of psychiatric disorders in India

Prevalence can be defined as proportion of population who have specific characteristics in a given time period. It is simply the total number of persons in a population who have a psychiatric disorder at a point or period (of time). It refers to both old (existing) and new (occurring) cases. In the above

definition if observational period is at a given point in time it is called as 'point prevalence' and if it is at a given specific period in time it is called as 'period prevalence.'

We need prevalence to plan appropriate intervention for health care needs for the population and also to provide baseline information for a prospective cohort follow-up to observe future new health outcomes. Prevalence studies are cross sectional studies and various methods are used to estimate the prevalence of mental disorders.

Most of the community based Indian epidemiological studies are on point prevalence and they report varying prevalence rates, ranging from 9.5 to 102 per 1000 population. The reasons for this could be differences in the methodology used like populations covered, sample design, timing of data collection, mode of data collection, instruments and surveys used, operational definitions etc, all of which impact the prevalence estimates.

The following table summarizes the prevalence of psychiatric morbidity in general population.

Table 2-1: Prevalence of psychiatric morbidity in general population

Investigator	Year	Centre	Location	Sampling	Tool	Population	Prevalence/ 100
Investigator	1964	Pondicherry	U	H-H	MHSQ	2731	9.5
Surya	1967	Lucknow	U	H-H	QAPF	1733	72.7
Sethi et al	1970	Agra	M	H-H	DCP	29.46	18
DubeElanger et al	1971	Hoogly	R	H-H	CHQ & DCP	1393	27
Sethi et al	1972	Lucknow	R	H-H	CHQ & CHM	2691	39.4
Verghese et al	1973	Vellore	U	SRS	MHIS &DCP	4481	67.0
Thacore et al	1975	Lucknow	U	H-H	PHQ &DCP	1977	81.6
Nandi et al	1975	West Bengal	R	H-H	HS, QS, CRS	1060	102.8
Nandi et al	1979	West Bengal	R	H-H	HS, SESS, CDS & CRS	3718	102
Shah et al	1980	Ahmedabad	U	H-H	MHSQ & DCP	2712	47.2
Mehta et al	1985	Vellore	R	S-S	IPSS & DCP	5941	14.5
Sachdeva et al	1986	Faridkot	R	H-H	HS, SESS & CDS	1989	22.22
Premrajan et al	1993	Pondicherry	U	RS	IPSS & DCP	1115	99.4
Shaji et al	1995	Ernakulam	R	H-H	IPSS, SESS, CRS & DCP	5284	14.57
Sharma & Singh	2001	Goa	M	SRS	RPES & DCP	4022	60.2
Deswal & Pawari	2012	Pune	U	PPS	CIDI	3000	51
Rao TSS	2014	Mysore	R	H-H	MINI	3033	244
Saha et al	2019	West Bengal	U	RS	SRQ, HFSS	152	210

Abbreviation- As given in the foot note of Table I. Source: Math et al 2007, IJMR, 183-192

U- urban; R- rural; H-H- house to house survey; S-S - systematic sampling; SRS - stratified random sampling; 3SPS- 3 stage probability sampling; RS- random sampling, ICD- international classification of diseases DSMII-diagnostic and statistical manual of mental disorders.

Tools:

MHSQ= Mental health Screening Questionnaire,
QAPF=Questionnaire for the assessment of psychiatric state of the family,

DCP = Diagnosis confirmed by a psychiatrist(s)	*CHM = Case history method*
CHQ = Case history questionnaire	*IPSS=Indian Psychiatric Survey Schedule*
SFQ=Social functioning questionnaire	*MHIS=Mental health item sheet,*
PSQ=Psychiatric screening questionnaire	*PHQ=Psychiatric health questionnaire,*
HS=Household schedule	*QS=Questionnaire Schedule,*
CRS=Case record schedule	*CDS = Case detection schedule,*
SESS=Socio-economic status schedule	*Self-reporting questionnaire (SRQ)*
HFSS=Household food security scale	*RPES= Rapid psychiatric examination schedule*

Various meta-analysis of the epidemiological studies was done, and they have shown prevalence rates of 58.2 per 1000 in one meta-analysis and 73 per 1000 in another study. The difference was due to differences in the selection of articles for the respective meta-analysis. Macro-economic commission report of 2005 considered prevalence rate of 65/1000 population (average of two meta-analysis) and projected the prevalence rate for next two decade. Other notable studies in India are Agra study, Kota study and ICMR-DST study.

World Mental Health (WMH) Survey, 2005

As part of the World Health Organization Initiative, in India was conducted at eleven sites. The main objective of the study to explore the 12-month prevalence and 12-month treatment for anxiety, mood, and substance use disorders in India. Sampling method used was stratified multistage cluster sampling with probabilities proportional to the size and one adult 18 years and older per household was selected randomly using the Kish tables. The eight districts of different states, covering rural and urban areas together had a household sample of 24,371 individuals (≥18 years). Respondents were interviewed face-to-face using the WMH Composite International Diagnostic Interview (CIDI) after translation and country-specific adaptations. Diagnoses were generated as per the International Classification of Diseases, 10th edition, Diagnostic Criteria for Research. The 12-month prevalence of common mental disorders was 5.52% - anxiety disorders (3.41%), mood disorders (1.44%), and substance use disorders (1.18%). Females had a relatively higher prevalence of anxiety and mood disorders, and lower prevalence of substance use disorders than males. The 12-month

treatment for people with common mental disorders was 5.09% (range 1.66%–11.55% for individual disorders). The survey revealed huge treatment gap of 95%, with only 5 out of 100 individuals with common mental disorders receiving any treatment over the past year.

Table 2-2: 12 month prevalence-common mental and behavioural disorders

WMH-CIDI/ICD-10	Total Sample	Male	Female
Any mood disorder	1.44	1.11	1.79
Depressive disorder	1.26	0.90	1.64
Dysthymia	0.33	0.27	0.40
Any anxiety disorder	3.41	2.44	4.42
Specific phobia	2.47	1.70	3.28
Panic disorder	0.52	0.35	0.69
Generalized Anxiety disorder	0.34	0.21	0.48
Any substance use disorder	1.18	2.23	0.08
Any WMH CIDI mental disorder	5.52	5.24	5.81

Abbreviation- As given in the foot note of Table 2. Source: IJP 2017 Jan-Mar; 59(1): 46–55.
CIDI- Composite International Diagnostic Interview, WMH-World Mental Health, ICD- International Classification of Diseases

Table 2-3: Treatment seeking in the sub sample with diagnosable mental disorders

WMH-CIDI/ICD-10	12-month treatment
Any mood disorder	6.24
Depressive disorder	5.54
Dysthymia	6.73
Any anxiety disorder	5.15
Specific phobia	1.66
Panic disorder	11.55
Generalized Anxiety disorder	5.64
Any substance use disorder	5.26
Any WMH CIDI mental disorder	5.09

Abbreviation- As given in the foot note of Table 3. Source: IJP 2017 Jan-Mar; 59(1): 46–55.
CIDI- Composite International Diagnostic Interview, WMH-World Mental Health, ICD- International Classification of Diseases

The study shows that 1 in 20 adults in India have a diagnosable common mental and substance use disorders. However, only 1 in 20 of these received treatment from the health system over the past

year showing the huge treatment gap that exists for these conditions. The limitations of this study were that it included only adult population (Child and adolescent age groups, which form over 40% of Indian population were not represented in this survey) and it at looked Common Mental Disorders only. Despite this, the study provides a valuable data for understanding the mental health needs of the Indian population and calls for a concerted effort to develop community-based mental health services in India on a priority basis.

National Mental Health Survey (NMHS 2016)

The Ministry of Health and Family Welfare, Government of India commissioned NIMHANS, Bengaluru to undertake a nationally representative psychiatric prevalence study to understand the burden and patterns of mental health problems, examine treatment gap, assess health care utilization patterns, the extent of disability and impact amongst those affected. The NMHS was undertaken in 12 states across six regions of India (North [Punjab and Uttar Pradesh]; South [Tamil Nadu and Kerala]; East [Jharkhand and West Bengal]; West [Rajasthan and Gujarat]; Central [Madhya Pradesh and Chhattisgarh]; and North-East [Assam and Manipur]). In each state, the dedicated team of investigators included mental health and public health professionals A pilot study was undertaken in the district of Kolar, the Public Health Observatory of National Institute of Mental Health and Neurosciences (NIMHANS). The Master Protocol for the study was drafted based on the results from the pilot study and finalized after deliberations with the National Technical Advisory Group and the National Expert Panel and discussions with the state teams. The methodology adopted was multistage, stratified, random cluster sampling technique, with random selection based on probability proportionate to size at each stage; all individuals 18 years and above in the selected households were interviewed. A subsample was included in four states to examine feasibility of methodology for understanding mental morbidity among adolescents (13–17 years). A total of 39,532 individuals across 720 clusters from eighty taluks in 43 districts of the 12 selected states were interviewed. The response rate was 91.9% at household level and 88.0% at individual level. Across the states, the population interviewed were similar to the state population characteristics and also representative of the country as per Census 2011. Both quantitative and qualitative methods were employed. A set of ten instruments including Mini International Neuropsychiatric Interview (M.I.N.I 6.0) was utilized to identify the cases, household information, sociodemographic details, tobacco use, screening for epilepsy, screening for intellectual disability (ID), screening for autism spectrum disorder, disability assessment, health-care utilization, and socioeconomic impact of illness. Information was captured on handheld devices, and strict protocols were established for data transfer and management with access-controlled mechanisms. To ensure quality apart from rigorous training, weekly and fortnightly review and problem-solving

meeting were held both locally and with the NIMHANS team.

The weighted estimates for the lifetime prevalence and current prevalence were derived for conditions included in the International Classification of Disease, Tenth Revision, Diagnostic Criteria for Research. As per the survey, the overall weighted prevalence for *any mental morbidity was 13.7% lifetime and 10.6% current mental morbidity.*

The age group between *40 and 49 years* was predominantly affected (psychotic disorders, bipolar affective disorders [BPADs]), depressive disorders, and neurotic and stress-related disorders. The prevalence of substance use disorders was highest in the 50–59 years age group (29.4%). Residents from *urban metro and lower income* quintiles were observed to have a greater prevalence of one or more mental disorders. An individual's risk of suicide in the past 1 month was observed to be 0.9% (high risk) and 0.7% (moderate risk); it was highest in the 40–49 years age group, greater among females, and those from urban metros.

ID screener positivity rate was 0.6%; it was greater among the younger age group, among males, and those from urban metro areas. The prevalence of morbidity among adolescents was 7.3% with a similar distribution between males and females (male: 7.5%; female: 7.1%) but was higher in urban metro areas. The current prevalence of anxiety disorders was 3.6%, and depressive disorders was 0.8%.

Table 2-4: Prevalence of mental disorders according to NMHS

Disorder	Lifetime prevalence	Current prevalence
Any mental illness	13.7%	10.6%
Substance use disorders	22%	22%
Schizophrenia and psychotic disorders	1.41%	0.42%
Bipolar affective disorders [BPADs]) and depressive disorders	5.6%	2.8%
Neurotic and stress-related disorders	3.7%	3.5%

According to the above findings (approximately) 13 crore population (130 million people) require mental health services. The treatment gap is defined as the percentage of an individual with mental illness, not on treatment. One of the major findings of the survey is that the treatment gap for mental disorders ranged between 70% and 92% for different disorders: common mental disorder - 85.0%; severe mental disorder - 73.6%; psychosis - 75.5%; BPAD - 70.4%; alcohol use disorder - 86.3%; and tobacco use - 91.8%. The median duration for seeking care from the time of the onset of symptoms varied from 2.5 months for depressive disorder. Of all the findings, the most important from public health point is the long duration of illness of severe mental disorders. In majority of the

cases, a government facility was the most common source of care. At least half of those with a mental disorder reported disability in all three domains of work, social, and family life and was relatively less among alcohol use disorder. Greater disability was reported among persons with epilepsy, depression, and BPAD. This huge treatment gap raises serious questions regarding the accessibility, affordability and acceptability of the available mental health services. The NMHS also assessed the median amount spent for care and treatment per month, which varied between disorders: alcohol use disorder is Rs 2250; schizophrenia and other psychotic disorders is Rs 1000; depressive disorder is Rs 1500; neurosis is Rs 1500 and for epilepsy is Rs 1500. To summarize, mental disorders are not only highly prevalent (10% of the population) and disabling medical conditions but also has huge treatment gap (80% of the PMI).

Table 2-5: Treatment gap of mental disorders- NMHS 2015-16

Disorder	Treatment gap in Percentage
Any Mental health problem	84.5
Common mental disorder	85
Major Depressive Disorder	85.2
Anxiety Disorder	84
Severe mental disorders	73.6
Bipolar Affective Disorder	70.4
Schizophrenia	75.5
Substance use disorders	91.1
Alcohol use disorder	86.3
Tobacco use disorder	91.8
Other Substance use disorders	72.9

National Survey on Extent and Pattern of Substance Use in India (2019)

Addiction is a global challenge with health and nonhealth hazards. A comprehensive government survey that covers all states and Union Territories was commissioned and funded by the Ministry of Social Justice and Empowerment; Government of India had depicted disturbing results (33). The primary objective of the National Survey was to assess the extent and pattern of substance use in each state and UT. To achieve this objective, a combination of two data collection approaches was employed. A Household Sample Survey (HHS) was conducted among a representative sample of the 10-75 years old population of all the states and UTs of the country. During HHS, 200,111 households were visited in 186 districts of the country and a total of 473,569 individuals were interviewed.

In addition, a Respondent Driven Sampling (RDS) survey was conducted covering 135 districts and 72,642 people suffering from dependence on illicit drugs. Several measures were taken to ensureoptimum quality, high standards and adherence to ethical principles during data collection and analysis. Data from HHS and RDS were analysed and collated to generate estimates for eight categories of psychoactive substances: Alcohol, Cannabis, Opioids Cocaine, Amphetamine Type Stimulants (ATS), Sedatives, Inhalants and Hallucinogens. The survey was conducted independently in each state / UT and country-level findings were generated by scientifically pooling data from all states and UTs. All the findings have been projected for estimated population of the country / state / UT in the year 2018.

Table 2-6: Prevalence of various substances in India

Name of Substance	Prevalence in India (%)
Alcohol	14.6
Cannabis	2.8
Opioids	2.1
Sedatives/hypnotics	1.08
Inhalants	0.7
Internet addiction	10 (Uttar Pradesh)

Source: IJP 2020 May-Jun; 62(3): 235–241.

Table 2-7: Prevalence of substance use/abuse in India

Alcohol	5.2% of Indians (5.7 crore people) are estimated to be affected by harmful and 2.7% (2.9 crore) dependent alcohol use.
Cannabis	2.8% (3.1 Crore people) report of using cannabis and 0.25% (25 lakh) dependent pattern users
Opioid	2.06% (2.4 Crore individuals) report of using opioids and 0.26% (26 lakh) dependent pattern users.
People Who Inject Drugs (PWID)	Nationally, it is estimated that there are about 8.5 Lakh People Who Inject Drugs
Inhalant	0.7% (77lakh) report of using inhalant and 0.08% (8.5 lakh) dependent users

In a country of >134 crores, there are a lot of challenges in addiction management. The most important issue facing the future of care in India is the challenge of integrating services.

Inter-departmental collaboration and co-operation is a must for the schemes to succeed. Political will is required to ensure that the magnitude of the addiction crisis is properly understood, and funding should be provided to tackle the menace. Finally, educating the users and society about the ill-effects of substance use and providing information about accessible and affordable treatment is required.

Burden of mental disorders in India: Global burden of disease study 1990-2017

Mental disorders contribute to the significant burden in India but there was no systematic understanding of the prevalence, disease burden. A study was conducted with collaboration of Bill & Melinda Gates Foundation, and Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India. This study used all accessible data from multiple sources to estimate the prevalence of mental disorders, years lived with disability (YLDs), and disability-adjusted life-years (DALYs) caused by these disorders for all the states of India from 1990 to 2017, as part of the Global Burden of Diseases, Injuries, and Risk Factors Study. They grouped states based on their Socio-demographic Index (SDI), which is a composite measure of per-capita income, mean education, and fertility rate (women younger than 25 years) and also assessed the association of major mental disorders with suicide deaths. This study reported that in 2017, 197.3 million people had mental disorders in India, including 45.7 million with depressive disorders and 44.9 million with anxiety disorders. There was modest correlation between depression and suicide. The contribution of mental disorders to the total DALYs in India increased from 2.5% in 1990 to 4.7% in 2017. In 2017, depressive disorders contributed the most to the total mental disorders DALYs (33.8%), followed by anxiety disorders (19.0%), idiopathic developmental intellectual disability (IDID; 10.8%), schizophrenia (9.8%), bipolar disorder (6.9%), conduct disorder (5.9%), autism spectrum disorders (3.2%), eating disorders (2.2%), and attention-deficit hyperactivity disorder (ADHD; 0.3%); other mental disorders comprised 8.0% of DALYs. This study has resulted in better understanding in terms of mental health burden in India. According to this, it has come to light that, One in seven Indians were affected by mental disorders of varying severity in 2017 and the proportional contribution of mental disorders to the total disease burden in India has almost doubled since 1990. However, there are Substantial variations between states in the burden from different mental disorders and in their trends over time. These state-specific trends of each mental disorder will help in better policy making to effectively address the mental health disease burden in our country.

If we consider all the prevalence studies, it is seen that at least 10% of the population have one or other mental health problem, which require mental health professionals help. Since there is systemic

underreporting, assessment of only priority mental disorders, using low sensitivity screening instruments, it can be considered that the prevalence in these epidemiological studies is lower than the true prevalence in the community. So, having better epidemiological studies will help in providing accurate data on prevalence of mental disorders in community which will help in appropriate allocation planning and allocation of the resources.

Reasons for wide variations in prevalence of psychiatric disorders

Prevalence rate of mental disorders vary within a population over a period of time and also across populations at the same time. This dynamic nature of mental disorders may play a role in the varying rates reported in Indian epidemiological studies. Similarly, on plotting the psychiatric epidemiological studies on the Indian map, studies are found to be concentrated only in certain places like [approximately] West Bengal (40%) and Uttar Pradesh (10%), which leads to difficulty in generalizing the findings. Defining a case is also one of the factors which contributed to the huge variation in the prevalence rate. If the threshold for defining a case is very low then the prevalence rate will be very high. Mental disorders are highly stigmatized conditions that many people want to keep private because of embarrassment or fear of discrimination.

The problem of systematic under - reporting continues to be a major challenge for the future of psychiatric epidemiology in India. For example, a survey of an urban community in southern India found that one-third of people with schizophrenia had never accessed any treatment resources. Even after the diseased individuals and their families were offered treatment, a third of them remained untreated. In Indian epidemiological studies, many researchers interviewed only the head of the family or the housewife or any other responsible family member for data collection. This will lead to responder bias and also recall bias. There is a high chance of underreporting of symptoms of minor mental disorders.

Though the majority of the epidemiological studies considered two-phase sampling for assessing prevalence, they were unable to tap the non-psychotic disorders like panic disorder, social phobia, agoraphobia, adjustment disorder, dissociative disorder, obsessive compulsive disorder, sexual dysfunctions, substance use and so forth in the community. Earlier studies prepared their own screening questionnaires, which was applied to the entire population to be studied without testing their validity for high-risk populations such as children, elderly and substance users, resulting in missing out on the minor mental disorders during the initial screening. This was a major drawback of these studies, which may have led to underreporting of mental disorders.

The sampling procedure employed should be appropriate, such that the sample obtained should be representative of the general population. If this is not achieved, then the generalizability of

the findings becomes difficult. Studies done on high-risk populations yielded a high prevalence rate. Hence, the selection should be representative of the general population. In the design of studies of people with mental disorders, in a community survey, it is also necessary to consider the likelihood of not being able to access people who are hospitalized due to illness, homeless people, wandering mentally ill patients and people who are not available for other reasons like occupation, custodial care, continuous care facilities and hospitalization for chronic physical illness.

Table 2-8: Reasons for wide variations reported in Indian epidemiological studies

Reasons for wide variations reported in Indian epidemiological studies
✓ Inherent nature of the psychiatric disorders
✓ Diagnostic methods
✓ Definition used to define a 'case'
✓ Systematic underreporting
✓ Recall bias
✓ Single informant
✓ Need for treatment
✓ Screening instrument
✓ Clinical interview, structured interview or semi-structured interview
✓ Sampling procedure
✓ Sampling bias

All the above factors played a crucial role in underreporting the prevalence rate in most of the Indian epidemiological studies. Because the screening instrument applied to the entire population had poor sensitivity in identifying minor mental disorders and also in high-risk populations such as the children and the elderly, it resulted in missing minor mental disorders during the initial screening. However, the majority of the researchers confirmed the diagnoses that were identified through the screening in the second phase avoiding false-positive cases. In addition to the poor screening instrument, recall bias, single informant and systematic underreporting have led to underreporting of mental disorders rather than over-reporting in Indian epidemiological studies

Is the prevalence of psychiatric disorders reported in India similar to other international studies?

Comparison with International studies

NIMH-Epidemiological Catchment Area study of the US reported psychiatric morbidity as follows; one-year incidence of 60/1000 population, one-month prevalence of 151/1000 population and lifetime prevalence of 322/1000 population. National Co-morbidity Study of the US reported 12 months prevalence of 277/1000 population and lifetime prevalence of 487/1000 population. On

comparing the Indian epidemiological studies to any international epidemiological studies, it is found that prevalence rates reported in India are exceptionally low.

Available evidence supports the first possibility of the underreporting by Indian epidemiological studies. However, the remote possibility of genuine low prevalence of psychiatric disorders in the Indian population cannot be disregarded because of low rates of substance use in the general population compared to Western countries and good outcome of psychiatric disorders due to various factors like better coping skills, religious, cultural, social and family support.

Table 2-9: Reasons for low prevalence of psychiatric disorders in India

- Indian epidemiological studies were not able to measure psychiatric morbidity adequately
- Psychiatric prevalence rates are truly low in India because of
  - ✓ Genetic reasons
  - ✓ Good family support,
  - ✓ Social support,
  - ✓ Cultural Factors
  - ✓ Lifestyle
  - ✓ Better coping skills and comfortable environment
  - ✓ Combination of above factors

Stability of Prevalence rate of psychiatric disorders in India

To answer the question, whether the prevalence rate of psychiatric disorders stable or changing, we have only two follow up studies

Follow-up studies

A 10-year follow-up study reported that there was not much change in the prevalence rates over a decade. This was further reinforced by the 20-year follow-up study. These two studies are milestones in psychiatric epidemiology looking at the same population cross sectionally at two points. Though the prevalence rate did not change, the morbidity pattern changed significantly. However, researchers and policy makers should exercise caution before generalizing the findings to whole the country. Reason being follow-up studies had small sample size done on rural population. We should also consider the changing trend in Indian population before generalizing the findings.

Table 2-10: Follow-up studies on prevalence of psychiatric disorders in India

Investigator	year	Center	Location	Sampling	Tool	Year	Population	Prevalence/1000
Nandi et al (1972-1982)	1986	West Bengal	R	H-H	HS, SESS, CDS & CRS	1972 1982	1060 1539	84.9 81.9
Nandi et al (1972-1992)	2000	West Bengal	R	H-H	HS, SESS, CDS, CRS & DCP	1972 1992	2183 3488	116.8 105.2

Abbreviation- As given in the footnote of Table 1; Source: Math et al., 2007, IJMR, 183-192

Incidence studies

There are only two incidence studies conducted in India, which reported almost similar rates of incidence. There is a need to carry out more incidence studies in representative populations. Incidence studies are essential to know the impact of intervention programs, globalization, recession, disaster and so forth.

Though there are no systematic studies in answering the above questions. However, an increase in population has increased the number of mentally ill patients in India. Lack of mental health manpower is a major threat to developing comprehensive psychiatric services in the community. Despite best efforts, the ratio between psychiatrist and population is worsening day-by-day. Main reason being the Indian population is growing at a rapid speed while the development of manpower is not. There are no attempts to address the issue of manpower in mental health

Table 2-11: Incidence studies done in India

Investigator	year	Center	Location	Sampling	Tool	Year	Population	Prevalence/ 1000	Incidence/ 1000
Nandi et al (1972-1982)	1976	West Bengal	R	H-H	HS, SESS, CDS	1972 1973	1060 1078	102.1 107.6	17.6
Nandi et al (1972-1973)	1978	West Bengal	R	H-H	HS, SESS, CDS,	1972 1973	2230 2250	110.3 108.4	16

Abbreviation- As given in the footnote of Table 1; Source: Math et al., 2007, IJMR, 183-192.

Prevalence of Psychiatric Disorder in high-risk population

Several studies have clearly shown that the prevalence of psychiatric disorder is high in certain population. Population subgroups, who are at risk of developing mental illness are as depicted in the table no 2-12.

Table 2-12: Population at high risk of developing psychiatric disorders

Female gender, Child and adolescent population, Geriatric population, People suffering from chronic medical conditions, Disabled population, Disaster survivors, Population in custodial care, Marginalized population ,Refugees and individuals with poor family, social and economic support

Prevalence of psychiatric disorders in child and adolescent population studies

Children and adolescents are at high risk of developing mental disorders. Most available Indian general population prevalence surveys have not utilized specific tools for addressing the disorders in children and adolescents. They have formulated their own screening instruments, or they have utilized screening instruments which can be applied to the adult population, hence no doubt they

have missed out mental morbidity in children and adolescents. A review article by Bhola and Kapur has summarized the prevalence of psychiatric disorders in the child and adolescent population. They have reviewed both community and school-based population studies. Early studies reported prevalence rates of psychiatric disorders among children ranging from 13 to 94 per 1000.

There are only a few epidemiological studies which were exclusively conducted to assess the prevalence rate in the child and adolescent population. The first methodologically superior study reported a prevalence rate of 94 per 1000 in a sample of 1403 rural children aged 8-12 years. Another methodologically strong ICMR-sponsored study conducted by Srinath and colleagues in 2005, has reported a prevalence rate of 12.5% among children aged 0-16 years. Similarly, a recent study also reported a prevalence rate of 16.5% in children 6-14 years of age. A meta-analysis of sixteen epidemiological community-based studies on 14594 children and adolescents; and seven school based studies on 5687 children and adolescents, reported the prevalence rate of 6.46% in community based sample and 23.3% in the school based sample. An interesting incidence studies of childhood psychiatric disorders in the community setting reported the rate ranging between 18-37/1000/yr. The children and adolescent form 40% of the total population of India, approximately 10% (four crores) of this population require professional help. The following Table summarizes the prevalence rate of the child and adolescent population.

Table 2-13: Prevalence of psychiatric morbidity in child and adolescent population studies

Investigator	Year	Centre	Location	Sampling	Tool	Population	Prevalence/ 1000
Sethi et al	1967	Lucknow	U	H-H	IQ, ICD-7	541	94
Elnagar et al	1971	Hoogly	R	H-H	CHM & DCP	635	13
Sethi et al	1972	Lucknow	R	H-H	IQ, ICD-7	877	81
Verghese et al	1974	Vellore	U	SRS	MHIS & DCP	747	81.7
Nandi et al	1975	Kolkatta	R	H-H	IQ, DCP	462	26
Hackett et al	1999	Kerala	U	RCS	CBQ, ICD-10	1403	94
Srinath et al	2005	Bangalore	U	SMS	SDP, SCL, CBCL, CBQ, FTN, DISC, PIS, VSMS, BKT, CGAS	2000	124
Anita et al	2007	Rohtak	M	SRS	CPMS & DISC	800	165

Abbreviation- As given in the foot note of Table I; Source: Math & Ravindra 2010, IJP, Vol 52 (Supl) 95-99 (56)

U- urban; R- rural; M – Mixed; H-H- house to house survey; RCS – Random cluster sampling; SRS – stratified random sampling; SMS - stratified multistage sampling; ICD- international classification of diseases.

Tools:

IQ=Interview Questionnaire
DCP = Diagnosis confirmed by a psychiatrist(s)
CBQ = Child Behaviour Questionnaire
SDP= Socio demographic proforma
Checklist PIS= Parent interview schedule
VSMS= Vineland social maturity scale
CGAS= Children's global assessment scale
DISC= Diagnostic interview schedule for children
CPMS= Childhood Psychopathology Measurement Schedule
CHM = Case history method
MHIS=Mental health item sheet,
SCL= Screening checklist
CBCL= Child Behaviour
BKT= Binet Kamat test
FTN= Felt treatment needs

Geriatric population

Senior citizens are at a high risk of developing mental disorders. The geriatric population, aged 60 years and above, forms nearly 7.5% of the total population of India. A study conducted in two villages of West Bengal reported that 61% of the geriatric population needed psychiatric help. Majority of them were suffering from depression. Other commonly reported mental disorders are insomnia, sexual dysfunction, anxiety disorders, somatoform disorders, organic mental disorders and dementia. *Depression is a common cause of disability in the elderly*. Consequences of untreated depression are, reduced life satisfaction and quality, social deprivation, loneliness, increased use of medications and health services, insomnia, cognitive decline, suicide and increased mortality. The population estimates show rising trend in the geriatric population group ,there is a definite need for conducting systematic studies in the geriatric population to estimate the prevalence of psychiatric disorders.

Disaster and mental health

Disasters are potentially traumatic events which impose 'massive collective stress' consequent to 'violent encounters with nature, technology or mankind'. Disasters threaten personal safety, overwhelm defence mechanisms, and disrupt community and family structures. They may also cause mass casualties, destruction of property, and lead to a collapse of the social networks and daily routines. A typical pattern of mental, emotional, and physical response is observed in the majority of people after exposure to any disaster. Various international studies have reported a wide range from 30-70% of mental health morbidity as an immediate aftermath of a disaster. A meta-analysis of 160 international studies of disaster victims found that posttraumatic stress disorder, major depressive disorder, generalized anxiety disorders and panic disorder, were commonly identified by most of the studies.

The recent COVID 19 pandemic has resulted in significant mental health issues in the

population. There is preliminary evidence from only few systemic studies regarding the prevalence of mental health issues due to COVID and rates are likely to change with increase in the studies in future.

One of the systemic review has shown that COVID-19 patients found a high level of post-traumatic stress symptoms (PTSS) and significantly higher level of depressive symptoms , whereas Patients with pre-existing psychiatric disorders reported worsening of psychiatric symptoms. A systematic review has shown that symptoms of anxiety and depression (16-28%) and self-reported stress (8%) are common psychological reactions to the COVID-19 pandemic, and may be associated with disturbed sleep. A recent survey in India reported that more than 80 % of participants experienced anxiety and preoccupation with contracting COVID-19, 12.5 % sleep difficulties and 34.6 % distress related to social media. The disaster mental health branch lags behind in terms of coordination, training, services, research and evidenced-based practices in India.

Table 2-14: Special/high-risk population studies

Investigator	Year	Nature of Risk	Location	Sampling	Tool	Population	Prevalence/ 100
Carstairs & Kapur	1973	Social changes in the community	U	H-H	IPSS & SFQ	1233	370
Nandi et al	1977	Tribal Community	R	H-H	HS, QS & CDS	2918	58.2
Nandi et al	1978	Uprooted community	R	H-H	HS, QS & CDS	1259	47.6
Nandi et al	1980	Marginalized population	R	RS	HS, SESS, CDS & CRS	4053	50.3
Nandi et al	1980	Urbanization	M	H-H	HS, SESS, CDS & CRS	1862	129.9
Sen et al	1984	Urban Slum dwellers	U	H-H	HS, SESS, CDS & CRS	2168	48.7
Banerjee et al	1986	Urbanized tribal Community	U	H-H	HS, SESS, CDS & CRS	771	51.9
Nandi et al	1992	Urbanized tribal Community	U	H-H	HS, SESS, CDS & CRS	1424	47.75

Abbreviation- As given in the footnote of Table I; Source: Math et al., 2007, IJMR, 183-192

Other high-risk populations

In Indian epidemiological studies researchers have sampled special population groups like urban slum dwellers, uprooted communities, urbanized tribal communities and attempted to compare across cultures. Studies done on the high-risk population yielded high prevalence rates. This

indicates the need for focused early intervention in the high-risk population to address mental health morbidity before it strikes.

Conclusion

Mental health problems range from the sub clinical states to the severe disorders, but majority of the epidemiological studies have focused only on the visible clinical disorders. Many of the general mental health issues remain unaddressed. It has been seen that the priority in our country is severe mental disorders ,which needs to change and the focus should shift to common mental disorders as well since the contribution of them to the burden is enormous and there is huge treatment gap for these disorders. Indian psychiatric epidemiological researchers had taken the task of bringing the numbers to the policy makers. However, in a country with limited human and financial resources, this did not receive much attention which is required. However, there is a positive change at least in the attitude of the public and policy makers towards mental health in the recent times but it has not been translated into the allocation of resources and funding yet. All the studies indicate that at least 10% (13 crores approximately) of our population has mental health disorders currently and we need to gear up the existing system to provide adequate help to this population. The major challenges in the mental health sector, like the lack of mental health professionals, financial aid and stigma needs to be addressed first. Strengthening the primary mental health care services and integration of mental health into general health could help in providing comprehensive care and overcome some of the challenges. Natural and manmade disasters have posed difficulties to the already existing low resources and hopefully MHCA 2017 and the current mental health crisis situation will at least serve as a catalyst for change in policy making in mental health field. The ultimate mission of research in psychiatry in our country must be both to close the treatment gap and to strengthen the scientific evidence base for the discipline of psychiatry.

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Chapter 3

Mental health concerns during pandemic

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HIGHLIGHTS

- Coronavirus disease (COVID-19) has been declared as a controllable pandemic by the World Health Organisation (WHO).
- COVID-19 though is a predominantly respiratory illness, it can also affect brain, in addition to other organs like kidneys, heart and liver.
- Neuropsychiatric manifestations are common during viral pandemics but are neither adequately reported nor effectively addressed.
- Fever and cough are common symptoms only in infected individuals but fear, anxiety and panic are common in even uninfected general public.
- In this chapter, the authors review the available evidence of psychiatric morbidity during the current crisis and also provide a framework for assessing and addressing the mental health concerns during pandemics.

Introduction

China had reported to the World Health organisation (WHO) on 31st December 2019 about the outbreak of a novel coronavirus (n-CoV) causing pneumonia in adults in the city of Wuhan in Hubei province. Since then the virus had spread to various countries across the globe including India and WHO had declared the illness has a controllable Pandemic. The identified virus is named as SARS-CoV-2 and the illness caused by the virus is named coronavirus disease 2019 (COVID-19). A meta-analysis conducted on the available studies from the current outbreak had suggested that fever (88%) and cough (58%) are the predominant complaints and overall 20% of the infected individuals needed intensive care unit admission (1). Hypertension (17%), diabetes (8%) and cardiovascular diseases (5%) were common co-morbidities. Bilateral pneumonia on chest radiograph (ground glass pattern) (73%), decreased albumin (78%), High C-reactive pattern (58%), high lactate dehydrogenase (57%) and lymphopenia (43%) were the prevalent laboratory findings. Early reports on case fatality rates vary widely between 0.15% and 5%. Though the most common presentation is a self limiting viral illness with fever and dry cough, severe infection is reported in 20% of the affected population. Headache and myalgia are commonly noted in COVID-19. Central nervous system

symptoms include dizziness (16%), headache (13%), altered sensorium (8%) and cerebro vascular events (3%). Reduced taste (5%) and reduced smell (5%) perceptions are peripheral nervous system manifestations. Myalgia with significant muscle injury happened in 12% of admitted patients (2). There are reports from across the world, that anosmia (reduced/absent smell perception) is more common than reported and it can be used in screening questionnaires.

Though emerging reports are reassuring, it is important to note that not all countries across the world are effectively enabled to provide effective responses against the virus. It is essential to understand the varied presentation of this illness to equip oneself to handle the potential crisis. In this selective chapter, the authors present the psychiatric manifestations, postulated mechanisms and management of Covid-19.

Psychiatric manifestations

Fever and dry cough are the commonly reported symptoms in infected individuals but psychiatric symptoms like fear, panic, worries, tension, anxiety and low mood are widely prevalent even among the uninfected general public. Preventive measures like social isolation and quarantine are known to exacerbate such psychiatric disturbances. Sleep disturbances are common during the pandemics and in infected individual which is a known risk factor to precipitate a mental illness and exacerbate or worsen the mental illness. Stigma and xenophobia might further additively affect the mental health status. The manifestations may not reach syndromal psychiatric constructs but symptoms as such are more prevalent.

A recent meta-analysis suggested the impact of COVID-19 pandemic on mental health is as high as 44%. Patients with COVID-19, healthcare workers and general public are psychologically affected in that order. Despite the high prevalence, mental health concerns are generally poorly assessed and inadequately intervened even in the inpatient wards. Inadequate training of the attending health staff in assessing the mental health issues and poor coordination between the available resources hinder the identification and appropriate intervention. Assessment of mental health concerns are needed at various levels. The authors propose the following framework to assess the mental health issues during pandemics and had presented available evidence during the current outbreak in a similar format.

Table 3-1: Framework for assessing mental health issues during pandemics

Mental health issues in
1. General Public
2. Frontline Healthcare workers
3. Infection suspected individuals

4. Infection confirmed individuals
5. Severely ill patients
6. Convalescence and long term
7. Individuals with pre-existing mental illness
8. Quarantined individuals

Concerns in general public

Fear of falling ill/dying, worries regarding financial distress, unemployment, panic about isolation/quarantine/lockdown, guilt about not able to care for/provide to the family, depressive cognitions, paranoia and mass hysteria are known to be common in general public. A nationwide online survey in China done after 31st January 2020 (after the WHO declaration of Public health Emergency of International Concern-PHEIC) had a total of 52730 valid respondents. More than one third (35%) of the respondents had reported psychological distress which was more common in women, migrant workers and people with high education levels (3). An online survey with 1200 respondents had reported significant psychological impact in 54% of the individuals.

Anxiety symptoms of moderate to severe degree were noted in 30% of the respondents while 18% had reported similar degree of depressive symptoms. Availability of accurate information and explanation of specific precautionary measures against the virus spread are important to reduce such anxious concerns (4). A nationwide online survey from India with 1106 responses reported more than one-third of the individuals expressing significant psychological impact. Another online survey from India with 354 participants had reported a quarter of them suffering from extreme depression and anxiety. People with high as well as very low levels of health anxiety might indulge in maladaptive behaviours during pandemics that might prove detrimental to the community. Machine learning prediction models applied in social networking sites had analysed and reported that the negative emotions (depression, anxiety etc) and sensitivity to social risk had increased in the general public while the positive emotions reduced after the declaration of the current epidemic outbreak.

Issues in frontline health care professionals

Fear of being infected/infecting others/loved ones, stigmatization from the society, physical and mental exhaustion of working extra hours/duties, guilt about not fulfilling duties, reduced social support and isolation from loved ones are common among frontline healthcare staff. A survey done during the COVID-19 outbreak among health care professionals (n=1257) had reported that around 72% had expressed significant distress (5). Reports of depressive symptoms (50%), anxiety symptoms (45%) and sleep disturbances (34%) were remarkably high and the severity was more in

frontline workers involved in actual diagnosis, treatment and care. A survey from India suggested more than one-third of the responded doctors experienced depression or stress or anxiety. A survey from NIMHANS conducted among the junior and senior residents reported that about one-third of the respondents expressed their mental health to be worse than before the pandemic. Early support from health care managers, adequate rest, availability of protective equipment, ease of contacting family members, education regarding 'moral injury" and after care are essential to promote the well being of health care professionals.

Concerns in infection suspected individuals

Anticipation of lab reports creates apprehension, worries and panic symptoms. Effects of isolation, shame and stigma are all common concerns in individuals suspected to have the infection. A cross sectional study conducted on COVID-19 suspected individuals, who were isolated for 14 days, had reported elevated levels of stress and anxiety and poor sleep quality. High levels of social capital (social trust, belonging and participation) were associated with increased quality of sleep in such individuals (6).

Concerns in infection confirmed individuals

Fear of health deterioration and death, shame, fear or guilt of spreading infections, sleep disturbances, anxiety and depressive thoughts are prevalent among infection confirmed patients (7). Available evidence from SARS outbreak (a corona- family virus) had provided information about varying psychiatric manifestations during acute and convalescence periods. Anxiety symptoms, sleep disturbances and poor concentration are reported commonly during acute phase (8).

Psychiatric manifestations in severely ill individuals

Prominent sleep disturbance, fear and worries regarding death, hopelessness, helplessness and suicidal ideas are common in severely ill in-patients. Various treatment options considered to manage such patients like hydroxychloroquine, anti-viral drugs (oseltamivir specifically), Interferons and corticosteroids are potentially reported to exhibit psychiatric side effects like depression and psychosis (9-11). A retrospective review from Spain had presented new onset psychosis with structured delusions (without delirium) in ten patients under treatment for COVID-19. The psychotic symptoms were noticed two weeks after the onset of COVID-19 somatic symptoms.

Concerns during convalescence and long term

Current outbreak is still at large in various parts of the world and the after effects of infection,

isolation and quarantine related mental health trauma is yet to be ascertained in detail. Apart from pulmonary and cardiac rehabilitation for people recovering from severe COVID-19 illness, neurological, cognitive and mental health related sequelae may complicate the functional recovery. It is indeed need of the hour to be prepared for these consequences to promote early recovery. A report from China suggested the traumatic after effects in stable COVID-19 positive patients. An online survey (n=714) conducted among stable patients who were ready to be discharged had reported that post-traumatic stress symptoms to be prevalent in as much as 96% of respondents (12). Post traumatic stress disorder, chronic fatigue and memory disturbances were observed during convalescence from SARS 2003 outbreak. There is an emergency call from the scientific community to prepare and strengthen the existing resources to better handle the after math of the pandemic.

Difficulties in managing persons with pre-existing mental illness

Sleep disturbances during the acute illness could potentially affect the mental health and exacerbate or alter the course of underlying mental illness. There is a report of acute outbreak of COVID-19 in 50 psychiatric in-patients in Wuhan, China. The authors had suggested that poor self hygiene, cognitive impairment, reduced awareness to seek help and prevailing discrimination towards mentally ill might contribute to the risk (13).

An online survey from India conducted among stable patients with severe mental illnesses, more than two-third patients lacked appropriate knowledge on precautionary measures against COVID-19. About one-third of the patients showed signs of relapse as well. A cross sectional study from the US done among youth with pre-existing mental illnesses reported that more than one-third of the respondents complained of significant depression, anxiety and insomnia despite their current clinical status. Telepsychiatry follow ups are suggested to be helpful in managing psychiatry outpatients during the times of such crisis (14).

Mental health issues in quarantined individuals

Although there are reports of positive impact of lockdown on infection spread, fear and anxiety are known to rise during lockdown and quarantine periods. Uncertainty associated with quarantine along with mistrust on the officials and rumours might worsen the mental health. During an acute outbreak of new viral illness, there are often less reliable facts about the illness. The desire to understand and know the facts and its consequent frustration leads to heightened anxiety and tension. During the quarantine, NIMHANS team had addressed the concerns of the quarantined air travellers and migrant workers both telephonically and in-person. Around 10-15% of the home quarantined air travellers had expressed significant depression, anxiety and insomnia features. Voluntary quarantine and accepting the altruistic nature of such exercises have been shown to have

been shown to have positive effects (15).

Postulated mechanisms

Neuropsychiatric manifestations could be secondary to direct neuroinvasion by the coronavirus. Similar to many respiratory viruses, Coronaviruses are observed to have direct effects on neuronal systems. The spread could happen through haematogenous route but most commonly reported entry is through the olfactory neural pathway. This invasion could result in meningitis, encephalopathy or at minor instances seizures. Secondary immune alterations are hypothesized to underlie the chronic neuropsychiatric sequelae. Possible direct medullary neuron destruction might precipitate respiratory failure in severely ill patients. Stress during virus outbreak is postulated to activate hypothalamo-pituitary-adrenal axis releasing increased levels of steroids. Steroids released impairs the immune system functioning and might precipitate the infection or worsen the severity. Viral infection further leads to neurasthenia and chronic fatigue. Sleep disturbances adds to the stress and might worsen or exacerbate the underlying illness. Poor oral intake, dehydration and poor adherence during acute illness further worsens the psychiatric illnesses. Psychiatric symptoms could also manifest secondary to side effects of drugs used to treat COVID-19 like hydroxychloroquine, oseltamivir, corticosteroids and interferons (9-11).

Prescribing psychotropic medications during pandemic

Management of mental health illness during viral pandemic is indeed a clinical challenge. Mass hysteria, panic, worries, concerns regarding contracting the infection, worries regarding well being of dear ones, uncertainty about the spread of infection, duration of pandemic, potential treatment options, jobs, social isolation and financial stress might cumulatively affect the mental health well being during pandemic (15). Misinformation and conspiracy theories that spread like wild fire during pandemic burden the mental health further. In most individuals, irrespective of the infection status, providing accurate information about the illness and reassurance are sufficient to reduce the mental health concerns. General principles of prescribing psychotropic drugs during COVID-19 are provided in Table 3-2;

Table 3-2: General principles in prescribing psychotropics during COVID-19 pandemic

1.	Assessment of the current COVID-19 infection severity
2.	Current Psychiatric diagnosis
3.	Extent/degree of underlying organ damage (Lungs,Brain,Kidney,Liver & Heart)
4.	Co-prescribed medications (side effects, toxicity, drug interactions)
5.	Oral intake status
6.	Hydration status
7.	Substance use (drugs, quantity, recent pattern change)
8.	Current Side effects

It is essential to understand the side effects, toxicity and drug interactions of prescribed medicines for COVID-19 along with prescribed psychotropic medications. It is also important to note the degree of organ damage secondary to current infection. Since most psychotropic drugs are metabolised through liver and kidney, severe damage to such organs might pre-empt the dosage adjustment. Benzodiazepines and sedating antipsychotics might aggravate the associated respiratory distress and could potentially be avoided. Also, benzodiazepines worsen the altered sensorium in neurological involvement. Overall oral intake and hydration status might inform the dose required and route of drug delivery. Caution to be applied while using lithium in individuals with kidney injury and poor hydration. Antipsychotics that prolong QT interval when combined with chloroquine or certain antivirals might precipitate cardiac arrhythmias. Mental health concerns that arise during pandemics in previously healthy individuals needs detailed evaluation. If the issues are subsyndromal, most often they could be managed with reassurance and for syndromal anxiety/depression/psychosis standard treatment guidelines could be followed. In psychiatric patients, if there is no worsening, the same drugs and dose could be continued. In case of worsening, assessment of adherence, stress levels and sleep disturbances is essential. Low dose and short acting benzodiazepines like lorazepam and clonazepam could be used to manage sleep disturbances. Therapy and dose adjustments might be required in few patients to overcome the crisis. Antipsychotics like aripiprazole, amisulpride and lurasidone have relatively less sedation and less cardiac side effects. Selective serotonin reuptake inhibitors like escitalopram and sertraline are preferred antidepressants. Mood stabilisers like Valproate and carbamazepine have liver enzyme related drug interactions and are to be used with caution.

Preventive psychosocial measures for mental health

Psychological need and want of each individual is different and varies in each region. The needs of different age groups, genders are to be evaluated before prescribing psychological interventions. One size doesn't fit all. Hence, culturally relevant and context based psychological measures are to be advised. Inter-disciplinary coordination and integration with the main stream intervention teams would be the suitable approach. Standard training in identifying the issue and formulating an intervention is essential. Providing available basic official, updated information about the illness and simple reassurances are mostly the minimum requirements. Such communication goes a long way in allaying unnecessary anxiety and worries. Rapid brief counselling and psychological first aid are proposed during the acute outbreak while structured skill training programs could be done after the outbreak. Utilising local leaders in providing such “impact messages” in frequent intervals avoids panic among general public. Identifying sleep disturbances and advising sleep hygiene measures is an important step especially is isolated/quarantined individuals. Online/virtual

interventions are considered safe and feasible. Current substance use pattern and craving needs to be appropriately addressed and supportive interventions are to be provided.

Health establishments might proactively offer certain measures like safe working environment, availability of essential protective equipments, work force management, duty rotations, shorter working periods, adequate frequency of rest periods and support from supervisors and peers to avoid burn out and promote mental health in actively involved health care workers. Such preventive measures are reported to have a significant positive impact (16). Development of standard self help materials, ways to handle crisis, Do's and Dont's, innovative ideas to kill boredom, productive ways of spending isolation/quarantine with available resources and their dissemination across the society would be of much help.

Spreading accurate information, clarifying myths, addressing the local concerns and engaging the social influencers in the campaign are important to help in addressing the prevalent social stigma during pandemics. Especially stigma against health care staff/other governmental staff could be avoided by launching the "Heroes" campaign that honours caretakers and health care professionals who are toiling hard during the outbreak.

Tele-psychiatry services

Widespread use of social media during such pandemic can provide information accessible to everyone but also increase the apprehension regarding the threat. The spread of conspiracy theories is also prevalent and confuses the general public and hence it is important for the governments to be transparent and honestly deliver accurate scientific information. Model for utilisation of electronic media in identification and intervention for mental health issues is proposed in china. Across the globe many governments had reduced or removed the barriers for telemedicine services. During the current crisis that includes hospital out-patient service closures, professionals themselves are realizing the potential benefits of utilising the modern telecommunication systems in enhancing the patient care. They have started using text messages, phone calls and smart phone video based applications to reach their patients. Experiences from Italy and France suggest that during the current outbreak, the telepsychiatry services could be set up overnight and was helpful to manage outpatients. This was also utilised to manage mental health concerns in health care workers. The Indian government has released guidelines for practice of telemedicine with a goal of reaching the unreached in this densely populated country (https://www.mohfw.gov.in/pdf/Telemedicine.pdf). This proactive step from the government and the medical council of India is lauded as a patient friendly approach and a potential opportunity in delivering inclusive health care across the nation. National Institute of Mental Health And Neurosciences (NIMHANS) Bengaluru, India has started a

National telephone helpline (for psychosocial support and mental health services; PSSMHS) (Toll free number: +91-80-46110007) on 29th March 2020 to specifically address the mental health crisis during this pandemic. Such telemedicine initiatives are reported to be suitable for people from remote areas to have access to mental health care without the risk of infection. However, consent from patients, confidentiality of case records and accessibility to network services are seen as important challenges in implementing the Telepsychiatry services. The practice of psychiatry or medicine in general might see drastic and durable changes in the coming years.

Conclusion

Psychiatric manifestations are common during COVID-19 pandemic. Mental health disturbances add burden to the physical stress and negative psychological effects of quarantine and isolation. Though the psychological concerns are common, the assessment and reporting are relatively low. Inadequate training in mental health and poor coordination between the teams lead to deficits in intervention. Structured assessment of different population and integration of public mental health with the emergency response first line team is the need of the hour. Methods of psychiatric research during such pandemics needs standardization and should include the mentioned framework. Investments in Telepsychiatry services should increase and might yield significant benefits in near future. Utilization of available technology would pave the way for futuristic training programs, education and clinical patient care. Psychological interventions through online web based applications should be promoted and could be utilised to improve peer support.

Future directions

Focussed attention given to the current acute challenges faced by various sectors (health, finance, production, agriculture etc..,) during the current pandemic is not enough. The deleterious after effects of such huge magnitude pandemic would be devastating. The preparation for such post acute care events might need several months and should be initiated as early as possible. Essential system to handle the physical and mental health care of people recovering from the illness should be formulated and ready. Dedicated rehabilitative measures to be envisioned and implemented to handle further crisis. Development of specifically focussed mental health guideline for such infection related outbreaks might be the way forward to strengthen the existing resources.

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Chapter 4

Severe Mental Illnesses (SMI)

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HIGHLIGHTS

- Severe mental illness (SMI) refers to psychiatric disorders that are often so debilitating that a person's ability to engage in functional and occupational activities is severely impaired. Schizophrenia, bipolar disorder, substance use disorders (SUDs) and obsessive compulsive disorder (OCD) are often referred to as SMIs.
- Schizophrenia has varying outcomes
- In Asian countries, overall, about 60% of patients with schizophrenia show substantial clinical improvement and slightly less percentage of patients show functional improvement.
- Psychosocial variables e.g. social support and network, expressed emotion, stressful life events, coping strategies of the patients and their caregivers, burden of care experienced by the relatives, family typology, family dynamics, attitude towards illness, guilt, hostility and stigma associated with schizophrenia etc. are implicated in the outcome of this disorder.
- Operational definition of recovery from schizophrenia that includes symptom remission, improved vocational functioning, independent living and improved peer relationships.
- Outcome variables for recovery included are symptom remission, time spent in psychotic episode, pattern of course, social functioning, occupational functioning, follow up time spent in psychotic episode, proportion of time on antipsychotic medication, hospitalization rates & neurocognitive dysfunction.
- In India, BPAD has been found to have predominantly manic episodes. 9 Mean age of onset is about 24.8 years. On an average, for an illness duration of 13.4 years, subjects have around 5.7 mood episodes 9 High number of past episodes predicts a higher number of future episodes.
- Community prevalence estimates of OCD in adults range from 0.5% to 3% in most studies from India.
- In the SRI/CBT era, overall 40-60% patients will not improve with pharmacotherapy.
- Indian studies showed better outcomes in OCD than others

Introduction

Severe Mental Illnesses (SMIs) are relatively less common and more debilitating subset of mental illnesses. SMIs are defined in several ways. The National Institute of Mental Health (NIMH) defines SMI as "mental, behavioral, or emotional disorder resulting in serious functional impairment which substantially interferes with or limits one or more major life activities" (1). The National Advisory Mental Health Council stated "SMI is defined through diagnosis, disability, and duration, and includes disorders with psychotic symptoms such as schizophrenia, schizoaffective disorder, autism, as well as severe forms of other disorders such as major depression, panic disorder, and obsessive compulsive disorder" (2). In the National Mental Health Survey (NMHS) (2015-16), schizophrenia, other non-affective psychoses, and bipolar affective disorders were considered as SMIs. As per Heller et al, SMI refers to psychiatric disorders that are often so debilitating that a person's ability to engage in functional and occupational activities is severely impaired (3). There are various ways of defining SMIs, but what appears to have important conceptual bearing is that SMIs are not fixed or specific illnesses but are those mental illnesses that lead to significant long-lasting disability in various aspects of life.

This chapter aims to present a bird's eye view of important studies in community psychiatry to understand SMIs, especially in which India was a part. The focus of this chapter will be to discuss schizophrenia and related psychosis, bipolar affective disorders, and obsessive compulsive disorders. The community studies discussed in this chapter are considered "landmark studies" as they have a significant bearing in the way in which mental illnesses are conceptualized, managed, and prognosticated.

Epidemiology - worldwide prevalence and burden

Chapter two discusses in detail the important concepts, methodology, and detailed description of individual epidemiological studies. This section provides a quick glance of important findings related to SMIs in epidemiological studies done worldwide which are summarized in Table 4-1. As per the National Survey on Drug Use and Health (NSDUH) (2017), 4.5% of the adults in the US are affected by SMI. Also, (i) the prevalence of SMI is higher in women (5.7%) than men (3.3%), (ii) young adults aged 18-25 years had the highest prevalence of SMI (7.5%) compared to other age groups, and (iii) prevalence of SMI is highest among the adults reporting two or more races (8.1%) and lowest among Asian adults (2.4%) (1). As per the National Mental Health Survey (NMHS) (2015-16), the lifetime and current prevalence of SMIs in India is 1.9% and 0.8% respectively (4). There is a higher prevalence of SMIs among males residing in urban metros, approximately by 2-3 times. As per the Global Burden of Disease Study (India) (1990-2017), the prevalence of bipolar disorders increased

during adolescents and plateaued during most of the adulthood, with a slight decline in the older age group and the prevalence of schizophrenia increased swiftly in young age groups, peaked in the 34-44 years age group, and declined steadily in the older age group. The population-level burden of schizophrenia and bipolar disorders increased in India between 1990 and 2017, with the increase mainly in developed states than in the developing states (5). As per the NHMS, three out of four persons with an SMI experience significant disability in work, social, and family life.

Table 4-1: Prevalence of SMIs

Illness	Study	Prevalence (%)	Gender	Burden
Schizophrenia & related psychosis	NMHS 2015-16	LTP: 1.41; CP: 0.42	No significant difference	DP: 53-59% TG: 75.5%
	GBDS (India) 1990-2017	0.3	M: 0.3; F:0.2	DALY:9.8%
BPAD	NMHS 2015-16	LTP: 0.5 CP: 0.3	No significant difference	DP: 59-63% TG: 70.4%
	GBDS (India) 1990-2017	0.6	M: 0.6; F:0.6	DALY:6.9%
OCD	NMHS 2015-16	LTP: 0.76 CP: 0.32	Higher in females	-
CP: Current prevalence; DP: Disability Proportion; DALY: Disability Adjusted Life Years; LTP: Lifetime prevalence; TG: Treatment gap				

Landmark Indian studies in SMIs

This section is divided into 3 parts. The landmark Indian studies in SMIs will be discussed under the following headings:

1. Schizophrenia and related psychotic disorders
2. Bipolar Affective Disorder
3. Obsessive Compulsive Disorder

Schizophrenia and related psychotic disorders

Schizophrenia is a highly disabling disorder prevalent worldwide and is associated with increased mortality, poor quality of life, and low recovery rates. Several landmark studies in India have evaluated the course and outcome of schizophrenia and related psychotic illnesses. These studies

are:

World Health Organization studies

a) International Pilot Study of Schizophrenia (IPSS) (6,7)
b) Determinants of Outcomes of Severe Mental Disorder (DOSMeD) (8)
c) International Study of Schizophrenia (ISoS) (9)

Other studies

a) Study Of Factors Associated with Course and Outcome of Schizophrenia (SOFACOS) (10)
b) The Madras Longitudinal Study (10 years and 20 years follow up (11)
c) The Thirthahalli cohort study (12)
d) Long term follow up of Agra cohort of the IPSS (13)

A detailed summary of these studies has been provided in Table 4-2. It is suggested to read the articles 1 -3 in the section on "suggested reading" for a critical understanding of these studies and to learn further about the concepts of course and outcome of schizophrenia. These articles discuss the methodological limitations and possible "bias" in the interpretation of the results of the WHO studies. These arguments were further countered by the investigators of these studies and clarified various questions raised by their contemporaries on the interpretation of the results.

Table 4-2: Landmark Indian studies of schizophrenia and related psychosis

Study	Aims & objectives	Description of the study	Important results	Remarks
(1) **IPSS** (1968-69) **WHO study** **Nine centres:** (i) **Developed**: Aarhus, London, Moscow, Taipei, Washington DC, Prague (ii) **Developing**: Cali, Ibadan & Agra **Investigator at Agra**: K C Dube **Subjects**: 1,202	To determine (i) if schizophrenia exists in different parts of the world (ii) if schizophrenia patients exist with similar characteristics in different countries (iii) the course of schizophrenia in different cultures	A) **Inclusion**: (1) 15-45 years, (2) Presence of either delusions, hallucinations, gross psychomotor disorder, definitely unusual behaviour, & (3) Those with severe degree of either social withdrawal, disorders of form of thinking, overwhelming fear, disorders of affect, self-neglect & depersonalization. B) **Exclusion**: (1) Organicity & (2) Substance use disorders	A) **Outcome predictors**: **Good:** Female, married, acute onset, lesser duration of untreated illness, initial social isolation & sexual adjustment, & occurrence of life event before onset. **Poor:** CATEGO class S+ & poor premorbid personality; B) **Highest proportion** of (i) **asymptomatic** patients: Agra & Ibadan; (ii) **symptomatic** patients: Moscow & Aarhus; C) **Best outcome** in Agra, Ibadan & London; **Worst outcome** in Aarhus; D) **Severe social outcome**: (i) Less in developing countries (ii) highest in Aarhus.	**Limitations:** (i) Not an epidemiological sample; (ii) Samples from developing countries had disproportionate number of acute psychosis cases. **Overcoming the limitations:** (i) DOSMED was hence planned which had an epidemiological sample; (ii) Even after controlling for acuteness of onset, developing countries had better outcomes

(2) **DOSMED** (1978-80) **Ten country Study**: 13 centres in 10 countries **Centres in India**: Agra, Chandigarh-rural & urban **Subjects**: 1379 **Male to female ratio**: 1.2:1	(i) To determine the incidence rates of schizophrenia in different cultures (ii) To link epidemiological estimation of incidence rates to a diagnostic & psychopathological analysis	A) An epidemiological study. B) A catchment area was defined around the center which was chosen. C) Active case finding within defined geographical areas, aiming to intercept all new-onset psychosis cases at all kind of facilities like mental health services, primary care, prisons, traditional healers, & religious shrines	A) **Onset:** Acute- 36%, sub-acute 18% & insidious-35%; Acute onset more in developing countries compared to developed. B) Paranoid schizophrenia was the commonest. C) **Incidence**: (i) **Broad diagnostic group**: 1.5 (Aarhus) to 4.2 (Chandigarh) per 1000; (ii) **Restrictive group:** 0.7 to 1.4 per 1000. D) **Best outcome predictors**: acute onset, developing countries, married, female, absence of social isolation and drug abuse;	A) **Offshoot in Chandigarh cohort:** Baseline assessment of expressed emotions was done. A two year follow up was done. Initial hostility predicted subsequent relapse; B) All patients included in this study were **new cases**; C) Acute onset was the **most important predictor** of several dimensions of illness.
(3) **SOFACOS** (1981-82) **ICMR** sponsored **3 centres**: Madras, Vellore	(i) To identify the sociocultural & clinical variables associated COS. (ii) To study whether the COS is	A) Inclusion criteria: modified Feigner's criteria; B) Established catchment areas for one year and followed up for five years;	A) **Psychopathology**: Lack of insight (65%), Blunt affect (62%), social impairment (60%), auditory hallucinations (56%), delusion of	A) Factors associated with good outcome were identified: (i) good compliance, (ii) short duration of illness, (iii) rural

& Lucknow **Subjects**: 386	better in developing countries as suggested by IPSS study. (iii) Do centres in India differ in the COS.		persecution (51%), reference (49%), control (24%), thought insertion (13%), broadcast (13%), & primary delusions (9%). B) **2 years** (83% follow up rate): **Course**: remission (64%), episodic (24%), & continuous (11%); **Outcome**: good (66%), best (23%), & suicide (2.3%); C) **5 years** (75% follow up rate): **Outcome**: good (67%), best (23%), & suicide (3.1%). D) No difference between the centres within India.	background, (iv) low education, (iv) more tolerance on the part of relatives, (v) involvement in religious activities, (vi) absence of: economic difficulties, dangerous behaviour, delusion of persecution, & self-neglect, & (vii) young age at onset (odd finding). B) This study replicated the findings of IPSS
(4) **ISOS** 18 centres in 14 countries **Subjects**: 1633 patients followed up at 15 & 25 years	(i) To describe long term outcome in 18 diverse incidence & prevalence cohorts. (ii) To compare the mortality, 15- & 25-years illness	A) It was a prospective cohort study. Study cohorts included subjects from IPSS, DOSMED, RAPyD (Reduction & Assessment of Psychiatric Disability), MLS, Hong Kong Longitudinal cohort.	A) **Course**: (i) 57% experienced a total of < 9 months of active psychosis, (ii) >50% of the living ISOS cohort was classified as recovered in the 2 years before the follow-up assessment, while a little	A) Various **course types** for schizophrenia were established. B) Results **replicated** the findings of previous studies.

	course, & the predictive strength of selected baseline & short term course variables	B) Important scales used were: GAF and WHODAS	over 25% of the patients had been continuously ill, (iii) 16% cases showed late improvement at the end of 15 years follow up. B) **Symptomatology**: Negative symptoms were common in the patients with continuous illness, & infrequent in those with episodic psychosis. C) **Employment rates** were nearly 75%, with high rates of work satisfaction.	C) **Time spent in psychosis** in the first 2 years following onset was found to be the **best predictor of outcome**. D) Short term course of illness was strongly found to **predict long term outcome**. E) Local environment was found to affect both outcome & disability.
(5) **MLS** (1981) **Subjects**: 96	To follow up FES, to study the course, symptomatology, social functioning, work & pattern of illness during this period	76 patients had follow up at the end of 10 years. 67% of the initial cohort was assessed at 20 years	A) Symptoms & social functioning were much better than those of developed nations as assessed by the GAF scale. B) Marriage & occupational rates were higher than seen in developed countries when compared with international studies	A) It is an important long term follow-up study from the developing world. B) It reveals a pattern of course & functioning which is distinctly better than that found in many such studies from the developed nations.

(6) **The Thirthahalli Cohort** **Subjects**: 201	Examine whether a feasible strategy of ensuring continuous anti-psychotic medication & psychoeducation in a developing country could positively influence the outcome of schizophrenia	A) Four years follow up of 201 subjects. B) Instruments: PANSS, IDEAS and Psychiatric and Personal History Schedule (PPHS). C) Interventions: ensuring continuous anti-psychotic medication & low intensity psychoeducation	A) 70% of the patients achieved clinical remission at the end of follow-up period of 4 years. B) Patients showed satisfactory outcome over a 4-year follow up period when they received antipsychotic medications & low-intensity psycho-social interventions. C) Overall outcomes were better in terms of symptom severity, remission from the episodes, and disability. D) Disability was particularly less among those with better medication adherence.	A) This study showed that ensuring adherence to medications & psycho-social interventions of low intensity could be a reasonable public health strategy to cater to community-dwelling patients with schizophrenia. B) Structured psychosocial interventions may be indicated in the significant minority who show suboptimal outcome with this strategy.
(7) **Agra cohort of IPSS** Subjects: 140 (original Agra cohort)	To assess the course & outcome at 13-14 year follow-up of Agra cases in the IPSS	Two methods used: (i) Mailed questionnaire (ii) Clinical examination & assessment using the	A) Assessment of clinical states revealed that nearly 60% of the patients were normal. B) As reflected by the key	Illness tended to lose its intensity over time.

		instruments used in IPSS	informants' perception through the questionnaire, 66% of patients were deemed to be normal.	

COS: Course and Outcome of Schizophrenia; FES: First Episode Schizophrenia

What are the key differences reported in the outcome of psychosis in developed vs. developing nation?

There is a considerable variation noted in the course and outcome of schizophrenia. The WHO studies hinted towards a better course and outcome of schizophrenia in developing countries. Subsequently, various factors were attributed to the favourable outcome in developing countries like (i) higher expectations of recovery, (ii) self-exempting models of illness attribution, (iii) therapeutic benefits of accommodating work, (iv) kin based stores of supportive social capital, (v) relative anonymity of life in industrialized world, (vi) low prevalence of substance use, (vii) inclusion of acute psychosis and (viii) support from family members (14,15). However, are these findings generalizable to all developing nations? There are various nuances that need attention while interpreting the findings of the WHO studies. To cite a few examples from the WHO studies, (i) in IPSS, best outcome of schizophrenia was found in Agra, Ibadan and London, (ii) highest proportion of patients spending less than 5% of time in a psychotic episode was found in the centres from the developing countries and Washington, (iii) two year outcome in Prague and Nottingham were like in India and (iv) outcome in Cali was similar to developed countries. A review of Asian studies evaluating the course and outcome of schizophrenia elucidated that the clinical and functional outcomes of schizophrenia in Asian countries was comparable and consistent with long-term studies done elsewhere in the world, and there were wide variations in the outcome of patients across different cohorts in Asia (16). There is evidence from the ISoS studies to suggest that the outcome in India was better compared to non- Indian centres. However, due to significant methodological differences in the non-ISoS studies conducted in Asia, comparison across different cohorts could not be made.

Conclusion and future directions

The variation in the course and outcome is interestingly present not only between the developing and developed nations, but widely exists even within the developing nations. More cross-national studies are required to explore the biological and cultural explanations for this variation which may have translational and public-health significance.

BIPOLAR AFFECTIVE DISORDER – COURSE AND OUTCOME

Bipolar Affective Disorder (BPAD) is one of the Severe Mental Illnesses. The disorder can be classified into type I and type II based on the peak severity of the activated episodes. However, the distinction between bipolar I and II disorders has limited utility in predicting the short or long-term outcomes. DALY loss caused by Bipolar Disorder ranges from 6-9% (5) - without much distinction, Bipolar I and II disorders are associated with similar degrees of psychosocial impairment and disability.

Our ability to predict long-term outcomes is limited as the clinical course and outcomes of bipolar disorder are highly varying entities. The long-term outcomes of bipolar disorder range from lasting remission to chronic disabling mood symptoms. Many patients require repeated hospital admissions, which account for a substantial portion of the healthcare cost associated with bipolar. The care needs of individuals with bipolar disorder vary. It would be advantageous to predict long-term outcomes so that specialized care can be directed to those with a greater likelihood of long-term adverse outcomes and readmissions (24).

Following are some pointers noted from Long-term outcome studies in BPAD:

- Most of these studies, especially those prior to 1966, are naturalistic in design
- They did not distinguish between bipolar and unipolar illness
- These studies showed that after a sufficiently long duration of illness approximately 25% of patients with BPAD developed persisting alterations concerning psychopathology and social functioning as per Marnero's Study
- The "newer" studies (post 1966) are more methodologically accurate and have looked at more concrete and quantifiable outcome measures.

Outcomes in Indian Context

Many long-term follow-up studies suggest that bipolar disorder (BD) is highly recurrent and that depressive episodes are commoner than hypomania/manic episodes. However, some studies from tropical countries including India suggest that the patients experience a greater proportion of manic episodes than depressive episodes. Following are the findings from 5-year follow up Indian study from NIMHANS (25).

- The predominant polarity (having at least two-thirds of their lifetime episodes at one polarity) was mania (79%).
- Unipolar mania (≥ 3 mania episodes and no episodes of depression) was observed in 48% of the subjects.

- The frequency of rapid cycling course was noted in 2.5% of the subjects.
- The onset polarity determined the predominant polarity during the course of illness.
- Predominant manic polarity group had the illness onset mostly with a manic episode (88.9%) and the predominant depressive polarity group with a depressive episode (73.8%). Mania was the predominant polarity with a high rate of unipolar mania and a majority of the subjects had greater number of manic episodes than depressive/mixed episodes.

Following are the characteristics of Indian cohort noted from retrospective study: (26)

- Mean age of onset is about 24.8 years
- On an average, for an illness duration of 13.4 years, subjects have around 5.7 mood episodes
- On an average, an individual suffered
    - 4.59 manic episodes
    - 0.95 depressive episodes
    - 0.08 mixed episodes and
    - 0.06 hypomanic episodes.
- 52.7% of the sample had only recurrent mania
- Patients spend about 11% of their illness in a mood episode

Outcome after First Mood Episode

- Despite adequate treatment, the course and outcome of BD are not satisfactory
- Full functional recovery is uncommon and full symptomatic recovery is much slower than syndromal recovery
- Initial manic episode predicts further manic episodes, but with better overall prognosis
- 40% of patients experience another episode within 2 years of syndromal recovery
- Predictors of manic relapse after the first affective episode include:
    - initial mood-incongruent psychotic features
    - lower premorbid occupational status
    - initial manic presentation.
- Predictors of depressive relapse after the first affective episode include:
    - higher occupational status
    - initial mixed presentation
    - presence of medical or psychiatric comorbidity.

Systematized Treatment Optimization following Early Mania (STOP-EM) (27)

In this study 101 patients with age between 14-35 years were recruited within 3 months following the First Episode mania (FEM). Patients were followed at 6 months interval and totally 81 patients continued until 4 years. Age at onset, Sex, presence of psychotic symptoms, comorbid SUDs,

comorbid anxiety disorders and family history of mood disorders were noted to be the predictors of outcome from this study. Following are the findings noted from the study following FEM,

- 98.8% attained remission at 6 months and 100 % at 12 months.
- 58% had relapse at 1 years and 74% at 4 years (Episodes: Depression (60%) > Mania (28%) > Hypomania(12%))
- Mean interval for recurrence: 5.3 months for depression and 13 months for Mania.
- Interepisodic interval decreased for patients with comorbid SUDs and those who have psychotic symptoms in FEM
- Mean episode per year 0.81 per year (Episodes: Depression > Mania > Hypomania)
- Average duration spent in mood episode is 11% (Episodes: Depression > Mania > Hypomania)
- Mood incongruent psychosis noted to have increased Hazard's Ratio.

Predictors of Outcome in BPAD

Several long-term studies have been conducted to look at outcomes in BPAD. The following are common observations from these studies:

1. Socio-demographic variables such as age of onset, gender, age etc. are **not** predictive of outcome.
2. High number of past episodes predicts a higher number of future episodes. This tautological observation is one of the most robust predictors of a negative course and outcome.
3. A high level of premorbid functioning predicts a favourable outcome. Presence of a comorbid personality disorder may result in a worse outcome.
4. High levels of inter episodic impairments and a chronic course also result in unfavorable outcomes.
5. Good treatment compliance results in a better outcome
6. Life events may enhance the risk of developing both a manic or a depressive episode.
7. Comorbid substance use is correlated with a poorer course and outcome.
8. Mood incongruent features result in a poorer outcome
9. There may be a depression prone subtype which has a poorer outcome than other subtypes of bipolar disorder.

BPAD and Substance Use Disorders

Evidence suggests a debilitating outcome of co-occurring of bipolar disorder (BD) and substance abuse. At least 50% of adults with BD go through uncontrolled impulsivity and SUDs in some point in their lives. People diagnosed with BD are more susceptible to greater use of cocaine, amphetamines, opiates, cannabinoids and hallucinogens in comparison with other psychiatric

disorders such as schizophrenia. SUD affects many aspects of BPAD regarding clinical course, psychopathology and prognosis. Some studies demonstrate that male gender, history of higher number of manic episodes and suicidality are associated to higher susceptibility to SUD. Thus, assignment of more intensive therapeutic interventions should be considered in patients with increased risk of drug abuse to prevent development of SUD. Also patient who had early onset SUD especially alcohol, were noted to have increased number of episodes and SUD itself an independent risk factor for poor adherence which proportionally increase relapses (28).

For further understanding, kindly go through the following table which summarizes some important studies looked at the course and long-term outcomes in BPAD.

Table 4-3: Landmark studies depicting course and outcome of bipolar affective disorders

Study	Duration of observation (years)	Number of subjects and diagnostic groups	Type of study	Results at follow-up	Remarks
"Classical" Studies Wertham F (1929), Rennie T (1942), Lundquist G (1945), Kinkelin M (1954), Hastings D W (1958), Bratfos O et al (1968)	1-26	42-2000, various diagnostic groups, mostly manic-depressive illness	Retrospective or catch-up	2/3rd patients had a unipolar course and 1/3rd patients had a bipolar course among hospitalized manic- depressive patients. 15-20% of bipolar patients had a markedly unfavourable course.	In 1966, Angst et al showed that the Kraeplinian unitary construct for affective disorders was not vaild. Studies prior to 1966 have been termed as "old" studies
Tsuang et al (1979) (Iowa-500 Study)	35	100 Bipolar, first episode manic	Catch-up naturalistic Non-psychiatric control group	• The course of bipolar illness was better than in schizophrenia but worse than in non-psychiatric controls. • 64% good, 14% fair and	One of the most important psychiatric follow- up studies till date due to its accurate methodology and long observation period. Schizoaffective and bipolar

				22% poor prognosis in bipolar patients.	affective disorders had a comparable course and outcome in many respects but schizoaffective disorder was more severe.
McGlashan (1984) (Chestnut Lodge Follow-up Study)	19 Bipolar (DSM-III/Research Diagnostic Criteria)	Catch-up, naturalistic		• After almost 16 years of follow-up, 26% of bipolar patients lived in a hospital or sheltered environment; • global functioning was poor for 32% and 11% had fully recovered after 19 years of follow-up. • After 15 years of follow-up, • adolescent-onset manic patients had more psychotic symptoms and greater chronicity than adult-onset manic patients.	
Marneros et al (1993) (Cologne Study)	25	402 patients, Final diagnoses at catch-up were	Catch-up, naturalistic	After 25 years of follow-up, • 33% of bipolar affective had mild to moderate	• Social adjustment as assessed by Disability Assessment Schedule was

		affective disorder [(n=106; dichotomized into bipolar (n=30) and unipolar (n=76)], schizoaffective disorder (n=101), schizophrenic disorder (n=148)		residual symptom • 52% of bipolar schizoaffective patients had mild to moderate residual symptoms. • Bipolar affective patient had suffered from a median of 5.0 episodes, bipolar schizo-affective from 5.7, both with a median length of two months. • Global Assessment Scale score after 25 years: 85 in bipolar affective and 75 in bipolar schizoaffective.	moderate to low for 20% of the bipolar affective and 36% of the bipolar schizoaffective patients. • Negative outcome regarding employment was seen in 29% of the bipolar affective and 53% of the bipolar schizoaffective patients. • 29% of the bipolar affective and 26% of the bipolar schizoaffective patients had a negative outcome concerning social situation. • At 25 years of catch-up, 12% of the bipolar affective and 28% of bipolar schizoaffcetive patients did not live independently.
Angst (1978, 1995) (Zurich Study)	28	220 Bipolar (DSM-III)	Prospective, naturalistic	• The annual change rate from unipolar to bipolar was 1% per year.	Over a period of 28 years, Angst et al had prospectively followed up

				• Earlier age of onset of depression was the only significant predictor for a unipolar to bipolar switch. • BPAD had more and shorter episodes compared to unipolar patients. • The median cycle length was 32 months in pure bipolar, 35 months in schizo-bipolar versus 54 months in pure unipolar and 62 months in schizodepressive patients. • Chronicity seen in 16% of the bipolars. • 5 year remission occurred in 16% of all bipolar cases versus 26% in unipolars.	to 220 bipolar patients. Since schizoaffective forms resembled their affective counterparts very closely, the authors concluded that "schizophrenic symptoms, present in schizo-depressives or schizo-bipolars, do not affect the cycle length." Since the overall medians of cycle length did not differ as compared to the pre-pharmacological era, it was assumed that modern pharmacotherapy does not really lead to shorter cycles but only suppresses symptoms. The collated study reports concluded that bipolar affective and schizoaffective disorders lie on a continuum with schizoaffective bipolar disorder having a more severe form.

Coryell et al, (1995) Akiskal et al (1995) (NIMH Study)	10-11	The NIMH Collaborative Program on the Psychobiology of Depression Prospectively followed up bipolar patients up to 15 years. 165 patients with bipolar I disorder were followed-up over 10 years.	Prospective, naturalistic	5% of the initially non-bipolarprobands developed mania and 5% developed hypomania during the observation period of 10 years. Switch rates from bipolar II to bipolar I were 14% over 10 years. Converters from unipolar to bipolar I had more severe index episodes.	Data on the diagnostic stability of affective disorders was also presented by the NIMH study. The likelihood of at least one recurrence exceeded 70% within 5 years even with sustained lithium prophylaxis.
Coryell et al (1998) (NIMH Study)		Another report from the same cohort included 113 bipolar-I patients and their 15-year outcome.	Prospective, naturalistic	20% of the patients had an unfavorable outcome which was defined as having symptoms of major depressive disorder, schizoaffective disorder or mania during the entire 15th year of follow-up	A high rate of depression (but not mania) in the first two years of follow-up correlated with a less favourable outcome and higher rates of depression after 15 years.
MacQueen et al (2001)	"Up to 15 years"	1450 Bipolar patients were pooled from 17 patient cohorts	Meta-analysis	30-60% of all patients had detectable levels of psychosocial impairment. Low premorbid social	These bipolar patients were observed for up to 15 years. Predictors of good psychosocial outcome: high

				functioning, psychotic features during the course, a high number of prior admissions or past episodes, a high number of past depressions and usage of alcohol or other substances were predictive of a negative psychosocial outcome.	premorbid social and functional status, absence of psychosis during course, low number of past depressions, no history of alcohol / substance abuse.

RDC: Research Diagnostic Criteria, GAS: Global Assessment Scale

Adapted from Bipolar Disorder, editors Mario Maj, Hagop Akiskal, Juan Jose Lopez Ibor, Norman Sartorius; Wiley Publishers, 2002

COURSE & LONG-TERM OUTCOMES IN OBSESSIVE - COMPULSIVE DISORDER (OCD)

Obsessive-Compulsive Disorder (OCD) is characterized by repeated intrusive thoughts, urges, impulses called obsessions and cognitive/motor acts that serve to reduce the anxiety called compulsions. It is primarily treated with Serotonin Reuptake Inhibitors (SRI) and Cognitive-Behavioral Therapy (CBT). It is a relatively common disorder and can be traced historically across a broad social spectrum with multiple famous appellations (Eg. 'Scrupulosity', 'Zwangsneurose', 'Vasvas' etc.) and it does not appear to restrict itself to any specific group of individuals/ethnicities. .Compared to any other psychiatric illnesses, OCD has high levels of "Iceberg phenomenon" due to myriad of conservative religious ideology, customs and culture which is notably high in developing countries. Patients tend to be guarded about their symptoms and suffer from shame and guilt .This leads to late diagnosis which further affects the long term course of the illness. Community prevalence estimates of OCD in adults ranges from 1 – 3% (Ruscio et al., 2010) and the prevalence of OCD as per our recent NMHS-2016 was 0.8%, also it is one of the leading causes of disability due to mental illness. It accounts for about 2.5% of the total Global Years Lost to Disability (YLD) and is ranked among the top 20 causes of illness related disability in people aged between 15-44 years (17).

Measuring tools & criteria used in OCD

Tools most commonly used are

a) **YBOCS**- Yale Brown Obsessive-compulsive Scale .It is the most widely used rating scale in both adults & children and it is the gold standard instrument to measure severity ("YBOCS-goodman1989," n.d.). YBOCS is regarded as global measurer of symptom severity and does not provide severity of individual symptom dimensions. A total score of ≥ 16 is considered to be indicative of clinically significant OCD. The scale rates the severity of OCD in domains of Time, Interference, Distress, Resistance & Control (T-I-D-R-C) in both Obsessions and compulsions comprising from one to ten. Item 11 is Insight (higher score indicates poor insight), item 12 is Avoidance severity, item 13 is CGI severity and 14 is CGI improvement (18).

b) **Structured or Semi-structured interviews through MINI** - The Mini-International Neuropsychiatric Interview (19).

Response, remission, recovery and relapse in obsessive-compulsive disorder (20)

Operational Definition as per International Expert Consensus are as follows:-

- **Response:** A 35% reduction in Yale-Brown Obsessive Compulsive Scale (YBOCS) scores from the baseline plus Clinical Global Impression – Improvement (CGI-I) rating of 1

("very much improved") or 2 ("much improved"), lasting for at least one week.

- **Partial response:** Reduction in YBOCS between 25 and 35% plus CGI- Severity of at least less than 3("minimally improved") for at least one week is considered as partial response.
- **Remission:** YBOCS score of less than or equal to 12 plus Clinical Global Impression - Severity (CGI-S) rating of 1 ("normal, not at all ill") or ("borderline mentally ill"), lasting for at least one week.
- **Recovery:** As in remission above, but lasting at least one year
- **Relapse:** If the patient no longer meets the criteria for of more than or equal to 35 reduction on Y-BOCS scores (relative to pre-treatment) plus CGI-I rating of 6 ("much worse") or higher for at least one month.

Course of OCD

In the case of OCD, two major types of course types are seen (21)

1. Chronic course:

- Implies near persistent presence of symptoms.
- Symptom severity might wax and wane, with phasic exacerbations and incomplete remissions.
- There is never a complete relief from symptoms.

2. Episodic course:

- Symptoms are present only during an episode.
- For the remaining time, symptoms remit, with or without treatment.

OCD is significantly co-morbid with bipolar type I/II and minor bipolar disorders, anxiety states (GAD, repeated panic attacks) and social phobia. Studies suggest that co-morbid OCD is common among adults in the community, with the majority of those with OCD having at least one co-morbid mood or anxiety disorder with a prevalence of 7.4%. Co-morbidity of OCD and anxiety states was more common among women and co-morbidity with bipolar spectrum was more common among men. Co-morbid OCD was associated with significantly higher levels of treatment seeking, impairment, distress and suicidality compared with pure OCD. Co-morbidity with bipolar disorders significantly increased the risk for alcohol abuse/dependence. OCD when comorbid with bipolar disorder mostly runs an episodic course with worsening and improvement of OCD in depressive and in manic/hypomanic episodes respectively (22).

Long-term outcomes in OCD

Lower age at onset, longer duration of illness, duration of untreated illness, higher YBOCS score at baseline, poor insight, co-morbid Axis I & personality disorders such as schizotypal, anxious avoidant personality disorders are associated with poor remission rates**.** Having said, predictors of response are not consistent across studies and longer the duration of follow up is associated with good remission rates. Lower age at onset though a poor predictor for remission, pediatric OCD noted to have favourable long-term outcomes with pooled mean persistence rates of 40% and 60% for "full OCD" and "Subthreshold OCD" respectively as inferred from a meta-analysis**.** Through a literature review, long-term outcomes of OCD can be understood in two different ways, one from a pre-SRI era and other from post SRI era. Goodwin et.al reviewed 13 naturalistic studies in the pre-SRI/CBT era and found 60-80% of patients became asymptomatic by 1-5 years from the time of diagnosis. Skoog and Skoog found that almost 75% of patients are symptomatic at follow up after 4 decades (23). However these studies were noted to have methodological limitations.

In the SRI/CBT era, overall 40-60% patients will not improve with pharmacotherapy**.** As inferred from the first meta-analysis on long-term outcomes of OCD by **Sharma et al**, pooled remission rates in OCD was noted to be around 53% which is fairly a good number and notably the remission was following treatment with combination therapy with both SRI-CBT in most of the studies included in the meta-analysis. This gives us an insight that long-term outcome in OCD may be favourable when combination therapy available than with exclusive pharmacotherapy. However widespread treatment with CBT is not feasible at least in Indian context owing to low number of available psychiatrist and clinical psychologist per unit population (21).

Having understood the outcomes of OCD to an extend it is of considerable importance to be aware of the limitations. They are as follows:

a) Symptomatic remission might not always mean functional recovery. Data on quality of life, disability, or functioning were not included in any of these studies. Clinically and functionally meaningful improvement might require a much lower score on YBOCS for a given patient.
b) Other variables such as age at onset of OCD, presence of co-morbidities, and insight into illness could not be studied due to the absence of data on these variables in a majority of studies.
c) This meta-analysis included studies conducted at established treatment centers that cater to a population which actively seeks treatment. There might be difficulty in generalizing this to the general community as long-term outcome for patients in the general community may

differ.

Also, we should be cognizant of the fact that operational definition for outcome varies across studies – a percentage reduction in YBOCS score, YBOCS score <16 at the final follow-up, YBOCS score <12 at the final follow-up, YBOCS score <8 at the final follow-up, and no OCD symptoms for 3 consecutive years. Other psychiatric co-morbid diagnoses have been reported in one-third to four-fifths of the sample, with depression and anxiety disorders being the most common. The variations in co-morbidity may account for the different outcomes across studies.

The 15-year follow-up from the Harvard–Brown Anxiety Disorders Program found the remission rate to increase from a mere 16% at 1-year to 42% at 11-year follow-up implying that remission rates tend to improve with follow-up durations.

Course in Developing Country

In Indian studies the remission rates are around 71% and noted to have favourable outcomes compared to those from developed countries. Favourable outcome of OCD in Indian context can be attributed to patient characteristics. They are as follows:

- Self-referred ,
- Drug-naïve outpatients with shorter illness durations,
- Low comorbidity rates and
- Illness severity of moderate degree.
- There was no history of treatment resistance in majority of population.

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Chapter 5

Common Mental Disorders – Public Health Perspective

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HIGHLIGHTS

- Common Mental Disorders (CMDs) comprise of Anxiety, Depression and Somatoform Disorders
- The overall weighted prevalence (lifetime) of CMDs as per NMHS 2015-16 is 12.3% with a treatment gap of 85%.
- Their prevalence at the PHC level ranges from 11 – 46%
- Depression continues to be the most prevalent and morbid CMD followed by Anxiety Disorders (21st and 26th ranking – GBD study 2017)
- CMDs are more prevalent among middle aged women and risk factors associated are rural population, poverty, unemployment, divorced/separated, family history of Mental Illness and/or childhood traumatic experiences.
- However, recent trends in India suggest higher childhood and adolescent onsets in less developed and also affecting the working class belonging to both sexes of urban population in well-developed states of the country.
- The term 'Pathway to Care' refers to the referral path, i.e. the sequence of events by which a patient enters psychiatric care. The nodes in the path refer to the number of referral points *between* home and seeing a Psychiatrist.
- Average duration of visiting a Psychiatrist since first psychiatric symptom is 6 months with more than two-third of them having faith healers and non-psychiatric physicians as their first contact.
- Patients seen by Non-Psychiatric Physicians had more delay in reaching Psychiatrists than faith healers.
- Recent advances in Tele-Medicine facility has aided in implementing the 'task shifting/sharing' of early detection and care for CMDs at the primary care level and thereby targeting reduction of the treatment gap.
- There is a dearth need for a re-look into the existing promotive and preventive strategies at

educational institutes and workplace environment by collaborating with Clinical Behavioural Experts in a pragmatic manner.

- Understanding on the changing trend of CMDs and influencing policy makers should aid in effectively segregating resources to develop infrastructure and manpower for targeted interventions at all levels of care.

Introduction

The Common Mental Disorders (CMDs) usually comprise anxiety, depression, and somatoform disorders. It is characterized by the presence of symptoms of anxiety, depression and other somatic complaints (1). CMDs are regarded as "invisible mental disorders" as it is mostly left undetected (2). Few studies had included Substance Use Disorders, OCD, and other stress related disorders in the past, but these entities have gained exclusive attention in the recent years. As the name suggest, they are highly prevalent among the general population as well as people suffering from other medical ailments, especially chronic conditions with almost 30% of them comorbid with any CMD. These disorders impair people's quality of life and contribute to morbidity and mortality, either independently or by worsening the course of the comorbid medical ailments. Hence a comprehensive understanding about CMDs is thus essential for improving the overall health and wellbeing of the community.

This chapter focuses on epidemiology and pathway to care of CMDs. It also intends to discuss briefly about disability and burden associated with CMDs and barriers in community for effective treatment.

Epidemiology – Prevalence and Burden

Prevalence of CMDs in general population

Estimates of prevalence of common mental disorders vary depending on the place, time and the period over which prevalence is measured. The chapter depicts the prevalence of CMDs from recent landmark studies. The following tables provide the data in a nutshell (3).

Table 5-1: Crude Prevalence of CMDs (GBD study 1990 – 2017)

Disorder	Prevalence (%)	Male (%)	Female (%)
Major depressive	3.3	2.7	3.9
disorder	3.3%	2.7	3.9

Crude Prevalence is the total number of cases in a given time period divided by total number of persons in the given population.

Table 5-2: DALY* of CMDs (GBD study 1990 – 2017)

Disorder	DALY (%)	Male (%)	Female (%)
Major depressive	33.8	28.9	38.6
disorder	19.0%	16.2	21.7

***Disability Adjusted Life Year** is a measure of overall disease burden expressed as the number of years lost due to ill-health, disability or early death with a given population.

Table 5-3: Estimated Prevalence of CMDs (NMHS 2015-16)

Disorder	Lifetime prevalence (%)	Current prevalence (%)
Major depressive disorder	5.25	2.68
Generalized anxiety disorder	0.57	0.57
Panic disorderAgoraphobia	0.50	0.28
without panic disorder	1.62	NA
Social phobia	0.47	NA

Estimated Prevalence is projecting the prevalence of a randomly selected (representative) sample population from the entire population under study. To ensure that the selected sample is the representative of the entire study population, statistical 'weights' may be applied to (project) arrive at the estimated prevalence.

The above-mentioned tables illustrate data from GBD study and the NMHS study. As a part of the Global Burden of Diseases Study, the Ministry of Health and Family Welfare India in collaboration with Indian Council of Medical Research (funded by Bill and Melinda Gates Foundation as well) initiated this State-level project to record the prevalence and burden of Mental Disorders including CMDs in the country. In addition to the prevalence and burden, this study has aided in tracing the changing trend in the distribution of Mental Disorders over the last 3 decades (1990 - 2017) which has been discussed in a separate section of the chapter below. The National Mental Health Survey 2015-16 is an study on the prevalence and burden of Mental Disorders initiated by the Ministry of Health and Family Welfare in association with the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru.

Somatoform and dissociative disorders: Somatoform disorders are encountered mostly in general population including primary health care. The prevalence of somatic symptom disorder based on DSM-5 ranges between 5-7% (4). The exact prevalence of somatoform disorders in India in a community sample is not known. The prevalence of somatization disorder from a study conducted

at NIMHANS was found among outpatient population to be 5% (5).

Prevalence of CMDs in primary health care

The prevalence of CMDs attending primary care settings in India ranges from 11.8% to 46.5% (6-9) (table 1). However, the generalizability of the results must be taken with caution as most of the studies are only from South India.

Prevalence of CMDs in tertiary care

The prevalence of CMDs in tertiary care settings ranges from 14% to 28.9% (10-13). In a study conducted at NIMHANS, the prevalence of any CMD was 29.3% (14). Patients visiting tertiary care may be more chronic and resistant compared to those in general population.

Table 5-4: Prevalence of CMDs at primary & tertiary care

Settings	Study	Place	Prevalence rates (%) CMD	Prevalence rates (%) Anxiety	Prevalence rates (%) Depression	Prevalence rates (%) Somatoform
Primary care	Seshadri et al.,1988	Karnataka	11.8			
	Nambi et al.,2002	Tamilnadu	44	-	-	-
	Pothen et al.,2002	Tamilnadu	33.9	-	-	-
	Patel et al.,2008	Goa	31.6	-	-	-
Tertiary care	Murthy et al.,1976	Tamilnadu	27%			
	Bhogale et al.,1990	Lucknow	-	12.9	6.8	NA
	Srivatsava et al.,2012	Delhi	-	20.8	12.6	NA
	Shah et al.,2014	Gujarat	-	14	32	NA
	Rakesh et al.,2018	Bengaluru	29.3	12.8	17.3	5

Variation by other characteristics

Gender

CMDs tend to have a higher prevalence among women. According to NMHS 2015-2016, prevalence in females and males were 4.3% and 2.7% respectively. The prevalence of depressive disorders in females and males were 3% and 2.4% respectively (3). These gender differences has been consistent with other studies (15). Higher prevalence in females are argued to be due to gender discrimination, higher violence & sexual abuse towards women, antenatal and postnatal stress, and adverse socio-cultural norms (15).

Age at onset

The average age at onset of most of CMDs has been found to be in young adolescents and rare after 75 years (17). Anxiety disorders like GAD, Panic disorder, PTSD have a median age at onset 24-50 whereas phobias and separation anxiety disorder have early ages of onset (median age 7-14) (18). Depressive disorders have similar age at onset to those of GAD and panic disorder.

Urbanization

The prevalence of mental disorders has been found to be increasing as a consequence of urbanization (20). Several factors has been cited which include increased rates of violence, poor social support, migration and so on (21). Adolescents, young adults, women and elderly have all seem to be vulnerable to CMDs due to modernization and urbanization (22). The prevalence of depressive disorders and neurotic or stress related disorders in India were found to be 2-3 times more in urban metros (3,15).

Vulnerability and other risk factors

Several vulnerability and risk factors have been observed in CMDs. For e.g., female sex, family history of mental disorders, adverse childhood experiences, certain temperament (inhibited or withdrawn temperament), parenting (over involvement, criticality) has been observed as risk factors for anxiety and depressive disorders (23-25). For somatoform and other stress related disorders, comorbid anxiety, depression and substance use has also been noted as risk factors (26).

Impairment, disability & economic costs

Presence of any CMDs can impair one's quality of life, cause disability in all spheres of life which include social and economic burden. Worldwide, around 12 billion days of lost productivity has been attributable to anxiety and depression, amounting to cost of US$925 billion every year (27). As per NMHS 2015-16, CMDs has led to more than 40% disability overall and economic burden of 1000-1500 INR/month only for treatment and travel to access care (3). Anxiety disorders can pose

substantial burden of disability equivalent to other non-communicable diseases like diabetes (28). According to WHO statistics, Anxiety disorders has led to a global total of 24.6 million years lived with disability(YLD) (29). Economic costs of anxiety have also been contributed by inadequate medical resources and multiple consultations with other specialists due to somatic complaints.

Depression is a major contributor for disability across the world. Depression has been ranked as single largest contributor for non-fatal health loss. It has led to global total of 50 million years lived with disability (YLD) (29). The disability proportion among major depressive disorders in India was estimated to be 67%-70% (3). Suicide is one of the major public health problem and nearly two thirds have depression (30). Suicide accounts for around 1.5% of all global deaths and second leading cause of deaths among 15-29 years globally in 2015 (29). The GBD study has estimated that there were 230,314 suicide deaths in India in 2016 (31). Somatoform and other stress related disorders pose a great burden in social and economic aspects also. As patients generally approach primary care and other specialists for somatic complaints, it leads to multiple consultations, investigations thus adding to economic burden.

Emotional, cognitive effects due to common mental disorders can lead to lower productivity at work, increased absenteeism, loss of job and results in loss of personal and family income. Social effects include poor interpersonal relationships due to low self-esteem, poor motivation and longer-term impairment in social functioning. Marital and family relationships are adversely affected and parental depression/anxiety can lead to significant emotional disturbances in children (32). Hence, scaling up of economic investment over CMDs is crucial to decrease the disability and also to improve the healthy life years (27).

Comorbidity with other medical illness

CMDs and Non-communicable diseases

Due to the rise in prevalence of non-communicable diseases and the adverse impact of common mental disorders on the prognosis of other non-communicable diseases, it is important to understand the bidirectional relationship between CMDs and other NCDs. Multiple factors have been proposed for this association which includes shared biology, treatment related mechanisms, behavioral links and psychological factors (33). The pooled estimates of depression were 40% in patients with diabetes, 37% in patients with cancer, 38% in patients with hypertension, 39% in patients with stroke and 44% in patients with COPD (34). The pooled estimates of anxiety disorder were 29% in patients with diabetes and 27% in patients with cancer (34). There has been consistent evidence that comorbid CMD with other NCD lead to increased morbidity and premature mortality. Hence, a multidisciplinary approach is required for any non-communicable disease and adequate

management of comorbid CMD is essential.

CMD and epilepsy

Anxiety symptoms are very frequent comorbidities in patients with epilepsy that impact upon its functional outcomes. It has been estimated that up to 28% patients with epilepsy present with anxiety disorder and much more with symptoms of anxiety not amounting to disorder (35). Peri-ictal anxiety symptoms can be pre-ictal, ictal or post ictal and they often go unnoticed. Hence careful psychiatric evaluation is required for appropriate diagnosis and management of comorbid CMD for better functional outcome of patients with epilepsy (20).

Pathway to Care (PTC)

As mentioned earlier, CMDs are invisible disorders that might be overseen not only by health care providers (non-MHPs) but also by the individual/community suffering from the disorder due to various factors. The explanatory models of an illness influence the help seeking behavior of the community which thereby predicts their pathway to care. This section shall focus on the PTC of CMDs and those factors which influence it. Research on PTC earlier have predominantly been generic to all Psychiatric Disorders, but few recent studies have observed specific features to CMDs. Hence the data discussed below needs to be interpreted cautiously.

Definition

The term refers to the referral path, i.e. the sequence of events by which a patient enters psychiatric care. The nodes in the path refers to the number of referral points *between* home and seeing a Psychiatrist. For example, a patient who goes first to a family doctor, then a general medical practitioner and then a Psychiatrist followed a referral pathway of home – family doctor – general medical practitioner – Psychiatrist with 2 nodes.

Need for understanding the pathway to care (36)

Delay in Diagnosis - *increases Treatment Gap:* The delay is more when compared to SMDs. This is because SMDs reach emergency settings thereby gets attended earlier by a specialist whereas CMDs (especially the milder forms) reach only after multiple nodal points taking an average of 6 months to see a specialist.

Delay in effective treatment – *increases functional treatment gap:* CMDs are more prevalent in the community and primary care. Due to the above-mentioned reason and poor psychiatric skills of Primary Care Doctors, CMDs had been underdiagnosed and inadequately treated.

Increase in morbidity - *reduces quality of life:* In no time, CMDs have already undergone significant disability and morbidity with poor productivity at workplace and family environments

Increase in health care expenditure & visits: Due to these 3 factors, CMDs continue to visit health care facilities searching for an appropriate diagnosis and effective management. In the process, the expense on time spent on travel, absenteeism from work causing loss of pay (esp. daily wagers who are more vulnerable for CMDs), time & money spent on wrong treatment regimen.

Reframing Mental Health Care Delivery System & Policy: Understanding the PTC for any illness can aid the policy makers in allocating resources for training manpower, developing infrastructure and thereby optimizing mental health care delivery appropriately as per the levels of care.

Factors affecting Pathway to Care (36)

Unawareness of Illness: In a collectivistic society like India, individuals are socially expected to tolerate mental distress and hence in addition to milder forms, even moderate to severe forms of CMDs are overseen by the patient and their family members as a reason to seek help.

Social Stigma: Most community cases do not reach Specialists or even any medical facility due to fear of discrimination based on evaluation and/or diagnosis of Mental illness or even due to visit to a Mental Health Professional/Establishment. Break in confidentiality of sensitive/personal issues were also considered as a primal factor in seeking psychiatric care.

Myths and misconceptions: Due to superstitious beliefs, individuals having symptoms of CMDs reach religious or faith healers for solutions. This is especially seen in rural population with lower education and high inclination to superstitious and magico-religious beliefs. This is also reinforced by a misconception that visiting faith healers is less costly and effective for managing mental disorders.

Milder forms of disease: A portion of the cases shall not seek help as they feel that the symptoms might come down with time despite of awareness of psychiatric symptoms. Though this might me true especially in case of subsyndromal symptoms, few of them would emerge to have a diagnosable mental disorder subsequently. Research suggests that even subsyndromal symptoms need primary care attention to rule out any diagnosable disease taking the risk and vulnerability factors. This shall ensure venue for practicing promotive and preventive mental health even in the absence of disorder/disease.

Unawareness of availability of care: With the first level of unawareness being that the person has not acknowledged his/her psychiatric symptoms (as mentioned above), the next level is being unaware of treatment options and venues for the same. In addition, fear of higher cost, duration, side effects (e.g. misconception of addictive property of psychotropics) and modality (especially ECT – 'shock treatment') of treatment causes hesitation in seeking help.

Reputation of Care/Facility: It has been observed that rural parts of the country have preferred reputed faith healers as their first contact of care. In urban areas, especially with reputed tertiary care centers Psychiatrists and Non-Psychiatric Physicians have been the first contact.

Salient features on PTC for CMDs (37-39)

- Average duration to visit a Psychiatrist: 6 months
- Most common first contact (rural): Faith Healers
- Most common First contact (urban): Non-Psychiatric Physicians
- Most common person to refer (rural): Family member/relative/friend
- Most common person to refer (urban): Medical Doctors
- Persons who seek help by self had more delay reaching a health care facility (since the onset of first symptom) compared to patients brought by family
- Patients seen by Non-Psychiatric Physicians had more delay in reaching Psychiatrists than faith healers. This could be attributed to one of the following reasons:
    - Poor skills in picking up an underlying psychopathology
    - Poor liaison skills or unavailability of Psychiatrists at the locality
    - Personal commercial interest

Future Trends

The prevalence and burden of CMDs have always been at the higher end compared to their SMD counterparts (3,15). With changing nosology and newer training programs in Psychiatry, the detection rates have increased with improved management at all levels of care despite the controversy of overdiagnosis and pathologizing subsyndromal ailments (40). With that note, the following changing trends has been noted over the past 2-3 decades:

- Burden and magnitude of Anxiety Disorders are on the rise with close rankings with depressive disorders on the recent GBD study. Over the last 3 decades, anxiety disorders had jumped from 41st to 26th rank whereas Depressive disorders from 29th to 21st rank on DALY (41).
- Though continues to majorly affect middle aged women and risk factors of poverty, unemployment, divorce, etc., CMDs has been observed to cause major impact with predominant childhood and adolescents onsets leading to longevity in morbidity, especially of lesser developed parts of the country. In addition, they have caused increasing disability in the working urban population belonging to both sexes thereby influencing economic growth negatively (3,15,21,25).
- The above latter statement is attributed to the sudden flourish in urbanisation & industriali-

sation with inception of digital technology that has pushed a traditionally rooted country like India to face novel psychosocial challenges every now and then. Research has proven time and now that adverse life events causing emotional, physical and/or sexual abuse especially during childhood not only impacts the hypothalamo-pituitary axis but also leads to DNA methylation (e.g. NR3C1 gene) (25,42).

- Recent advances in Tele-Medicine facilities have aided in addressing this emerging trend by empowering PCDs for early detection and management of CMDs at primary care level. Futuristic view is that PCDs shall attend CMDs and refer only if necessitates to tertiary centres which shall cater for resistant and complex cases in addition to SMDs and other Psychiatric Disorders. This phenomenon named as 'task shifting' or 'task sharing' shall ensure strengthening the NMHP (43,15).
- This shall also pave way for change in nosology of pathways to care where there shall no longer necessarily be a Psychiatrist as the final point to define PTC. This is because empowering PCDs to effectively detect and manage CMDs will side-line the need for visiting an expert for appropriate diagnosis and care.

Conclusion

CMDs are illnesses of the masses and they are deserved to be treated at their doorsteps. A majority do not require visits to emergency (including physical, chemical restrains, emergency medical attention) or need for ECT services (44). With a portion of the Mental Health Professionals coming up with pharmacological interventions to address CMDs, its high time that more of them need to take an active role as advocates in influencing policy makers to regulate and make amendments in mental health programs. There is a dearth need for a re-look into the existing promotive and preventive strategies at different departments namely at educational institutes (i.e. schools, undergraduate and postgraduate institutes) and workplace (professional and industrial agencies) by collaborating with Clinical Behavioural Experts in a pragmatic manner. Further research on understanding the emerging modern psychosocial stressors (probable aetiology or precipitating factors), complexity of presentations including treatment resistance at higher centres and other relevant clinical parameters based on their pathway to care would thus be important. This should serve as a vital source to effectively segregate and allocate resources, i.e. infrastructure and manpower for targeted interventions for promoting, preventing, and treating CMDs at respective levels of care.

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Chapter 6
Epidemiology of Suicide

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HIGHLIGHTS

- Around eight lakhs people died of suicide in 2016 globally and the trend since 1990 in suicide death is in increasing face with 6.7% rise in suicide death from 1990 to 2016.
- Considering this burden of suicide on the community WHO recognized suicide as critical public health problem in its Comprehensive Mental Health Action Plan where it targets to reduce suicide mortality by 10% globally by 2020
- Warning signs can be verbal or behavioral in nature. Both are particularly important when they represent a change from the person's usual behavior.
- Most suicides are preventable with proper identification, assessment, and intervention.

Introduction

Suicide is defined as death caused by intentional self-directed injury (1). Epidemiology of any condition is prime important in understating the impact of the condition on the society and its burden on individual, family, society, and economics. In order to plan strategies to tackle the issue detailed epidemiological study should be carried out. Global data on the suicide is available from World Health Organization (WHO) and more recently from the Global Burden of Disease (GBD) study. Around eight lakhs people died of suicide in 2016 globally and the trend since 1990 in suicide death is in increasing face with 6.7% rise in suicide death from 1990 to 2016. World Health Organization (WHO) also adds that for every suicide death there are more than twenty suicide attempts. It states that suicide is second leading cause of death among 15-29 years old and 79% of the global suicides occur in LAMIC (Low and Middle Income Countries (2). Considering this burden of suicide on the community WHO recognized suicide as critical public health problem in its Comprehensive Mental Health Action Plan where it targets to reduce suicide mortality by 10% globally by 2020 (1).

Global Epidemiology

Suicide in numbers

There are different terns used while describing suicide data that includes:

a) Absolute number of deaths
b) Age-standardized suicide rate
c) Years of life lost

The suicide data in the WHO website shows that in 2016 there was around 1060000 deaths globally which meant that one person dies of suicide every 40 seconds (10.6/100000). According to WHO, suicide is the second leading cause of death after road traffic accidents among 15-29-year-old and WHO stresses that suicide is prevalent in all age groups accounting 1.4% of all deaths worldwide that brings suicide as 18th leading cause of death in 2016 and third leading cause of death among 15-44-year olds.

The GBD data talks about age standardized death rate and years of life lost and it states that crude death rate has increased from 1990 to 2016 while the standardized death rate has decreased from 16.6 to 11.2 per 100000 death from 1990 to 2016 which accounts for 32.7% of reduction. GBD states that 34.6 million life years are lost from suicide in 2016 and the global age standardized years of life lost from suicide was 458.4 per 100000 accounting for 21.8% of total years of life lost in 2016.

Regional trends

According to WHO, crude death rate (per 100000) was highest in European region (15.4) in 2016 followed by south-East Asia (13.2), Western Pacific (10.2), Americas (9.8), Africa (7.4) and the least in Eastern Mediterranean (3.9). The GBD data has divided the countries differently and gives maximum death in East Asia and the least in western sub-Saharan African region and in terms of age standardized death rates eastern Europe ranked first with 27.5 death per 100000 followed by high income Asia pacific and southern sub Saharan Africa.

Age and sex trends

According to WHO, overall rate of suicide increases with the age i.e., suicide rates are least in children and adolescent and highest in elderly more than 70 years of age. This global trend is followed in high income countries and in South Korea. While this varies in Low- and Middle-Income Countries (LAMIC) where suicide rate peaks in middle ages and decreases with elderly. Even in LAMICs this trend varies with some African countries showing least suicide rates in younger age groups. This trend in suicide is similar for males and females in some region while others did not follow this trend and varied among male and female among same region.

In term of sex, global age standardized suicide rate is higher for men than for women with female to male ratio of 1.8 in 2016. The regional and national trends in female to male ratio in suicide rate almost followed the global suicide rate.

Socioeconomic trends

The age standardized suicide rate is higher in high-income countries compared to LAMICs. However, considering the larger population living in LAMICs, these accounts for 75% of total death due to suicide globally (1).

Methods of suicide

Method of suicide varied between the regions and there were few exceptions within the countries from the same region. In the African region hanging was the most common method followed by poisoning. In the American region firearms use was the most common method. In the European, Australian and Asian population hanging and poisoning were the most common methods (3).

Indian Scenario

India homes 18% of the global population and it contribute a significant number to the global suicide death rate. Hence, it is imperative that without reducing suicide mortality in India, global suicide burden cannot be brought down (4). According WHO, 28 countries around the world have national suicide prevention strategies and India is not one among them.

In India, National Crime Records Bureau (NCRB), was the official register for suicide deaths and according to the data available from NCRB, the rate of suicide in 2015 was 10.6 per 100000 equating to 133263 deaths. This number available from the NCRB may be an under reporting of suicide due to the then prevailing legislation which considered suicidal attempt as an offence. In the recent Mental health Care Act (MHCA) 2017, suicidal attempt has been decriminalized. The Act considers persons with suicidal attempts as those in psychological distress and in need of help. This is expected to help in destigmatizing and improve help-seeking.

Indian numbers

Data on suicide in India is available through NCRB, WHO and GBD study. As mentioned earlier NCRB data has its own limitations. The WHO latest data shows crude suicide rate in India in 2016 was 16.3 per 100000. The GBD study showed that there were around 200000 death 2016 in India. With India accounting for 17% of world population, its contribution to world suicide burden among men was 24.3% and among women was 36.6%. The age standardized suicide death rate in 2016 was 17.9 per 100000 population which accounts for 2.35 % of all deaths.

The age standardized suicide death rate among women in 2016 was 14.7 per 100000 which was 2.1 times higher than global average with the highest rate in Tamilnadu followed by West Bengal and Tripura. Similarly, for men the age standardized suicide death rate was 1.4 times higher than global average with highest rate in Tamilnadu, Karnataka and West Bengal. The men to women ratio

of crude suicide death rate in 2016 was 1.34 and this ratio narrows in the younger age groups.

In India the highest proportion of suicide death among the younger age groups of 15-39 years in both male and female was suicide which is contrasting to high income countries data. The suicide rates are more in southern states compared to other states. The most common mode of suicide in India was poisoning followed by hanging and in women burning occupies place among the top three modes of suicide (4).

Million death study

Method

The Million Death Study (MDS) is one of the largest studies of premature mortality in the world. In collaboration with the **Registrar General of India**, **Central for Global Health Research (CGHR), university of Toronto**, the MDS monitored nearly 14 million people in 2.4 million randomly selected nationally representative households from the SRS (Sample Registration System) framework in India between 1998-2014. Any deaths that occurred in these households during this period were assigned a probable cause, as determined by a method called verbal autopsy (**RHIME-Representative, Resampled, Routine Household Interview of Mortality with Medical Evaluation**).

The published data on suicide included **suicide death between 2001-2003** and statistical methods were used to estimate the number of suicide deaths in India in 2010.

Important findings

a) About 3% of the surveyed deaths (2684 of 95 335) in individuals aged 15 years or older were due to suicide, corresponding to about 187 000 suicide deaths in India in 2010 at these ages (115 000 men and 72 000 women)
b) For suicide deaths at ages 15 years or older, 40% of suicide deaths in men (45 100 of 114 800) and 56% of suicide deaths in women (40 500 of 72 100) occurred at ages 15–29 years.
c) A 15-year-old individual in India had a cumulative risk of about 1.3% of dying before the age of 80 years by suicide; men had a higher risk (1.7%) than did women (1.0%), with especially high risks in south India (3.5% in men and 1.8% in women).
d) About half of suicide deaths were due to poisoning (mainly ingestions of pesticides).

Risk Factors and Evaluation

A commonly held belief is that it is hard to know when someone is thinking about suicide. However, people thinking about suicide frequently show warning signs for many days, weeks and even months that can be easily identified. Warning signs are often not directly associated with suicidal

thinking and hence can be missed. By knowing what these warning signs are, they can be easily identified in a person showing them.

The first step of suicide risk assessment involves identifying such warning signs. Once noted, such persons can be approached to confirm the presence of suicidal thinking and identify factors that increase (risk factors) or decrease (protective factors) risk for suicide.

What are the warning signs for suicide?

There are a number of warning signs which can suggest a risk of suicide. **EACH WARNING SIGN IS EQUALLY IMPORTANT AND SHOULD BE TAKEN SERIOUSLY.**

Warning signs can be verbal or behavioral in nature. Both are particularly important when they represent a change from the person's usual behavior. These include:

Verbal Signs

- Talking about ending life - "Sometimes I feel like I just want to die"
- Talking about feeling guilty or having committed a sin
- Talking about feeling hopeless or having no reason to live
- Talking about feeling trapped or in unbearable pain
- Talking about being a burden to others

Behavioral Signs

- Suddenly starting alcohol use or Drinking more alcohol than usual or using other substances
- Being restless, agitated (getting angry easily), anxious (very worried/ fearful)
- Feeling sad and dejected
- Sleeping too little or too much
- Withdrawing or feeling isolated (Outgoing or social persons interaction with family/friends decreases or stops completely)
- Showing extreme rage or talking about seeking revenge
- Displaying extreme mood swings (suddenly crying/ reckless/ hyperactive)
- Preparatory behaviors (giving away belongings, collecting medicines or pesticides)

What are the risk factors for suicide?

According to the WHO, a risk factor is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury. **THERE IS NO SINGLE CAUSE FOR SUICIDE.** Suicide results from combination of community, individual, societal and relationship factors that contribute to risk. WHO has grouped these factors into areas that span across systemic,

societal, community, relationship and individual risk factors.

Society

- Access to means
- Inappropriate media reporting
- Stigma associated with help seeking behaviour

Community

- Disaster, war and conflict
- Stresses of acculturation and dislocation
- Discrimination
- Trauma or abuse

Relationships

- Sense of isolation and lack of social support
- Relationship conflict, discord or loss

Individual

- Previous suicide attempt
- Mental disorder
- Harmful use of alcohol
- Job or financial loss
- Hopelessness
- Chronic pain
- Family history of suicide
- Genetic or biological factors

These risk factors can contribute directly to suicidal behavior and some factors may indirectly contribute to suicidality and these risk factors are intertwined with each other. These risk factors should be assessed according to the context which should include individual characteristic, societal norms, cultural and religious belief.

What are the protective factors for suicide?

Protective factors are those that can reduce or decrease the risk of suicide in an individual. Protective factors can help prevent the person from attempting suicide and thereby decreasing the risk:

- Having a good support from family, friends, and colleagues
- Easy local availability of help providing hospitals

- Support from counselors and doctors
- Ability to resolve problems and difficulties in relationships
- Cultural and religious beliefs that discourage suicide

The greater number of risk factors and fewer protective factors present in a person, the higher the immediate risk for suicide.

Prevention of suicide

Most suicides are preventable with proper identification, assessment, and intervention. Evidence-based interventions for prevention of suicide are of three kinds:

Universal prevention strategies

Universal prevention strategies are aimed at the entire population and includes increasing access to help, strengthening protective factors, and removing barriers to care. "Restricting of means" is one example that includes limiting access to pesticides, over the counter medicines, increasing access to health facility, reducing harmful substance use. In Sri Lanka, after the restriction of Class I pesticide and endosulphon suicide numbers has come down. A study conducted by Lakshmi Vijayakumar et.al., 2008, showed avoiding pesticides in farming reduced suicide rates (5).

Selective prevention strategies

Selective prevention strategies are aimed at vulnerable groups within a population based on characteristics such as age, sex, occupation. Gatekeeper training program (GKT) is an example of selective prevention strategy.

Indicated prevention strategies

Indicated strategies target vulnerable individuals within the population. In this strategy training health care force in effective identification of warning signs and management of person at risk of suicide.

Suicide is a public health issue and thus prevention strategies against suicide should have public health approach. As in any other public health condition the approach in suicide also should include surveillance, risk factor identification, prevention and evaluation. As per WHO, the key components of suicide prevention strategies are comprehensiveness and co-ordination from different sectors of community, empirical evidence for the intervention, measurable outcome, subject to change based on continuous evaluation and sustainability (funding). Very few countries have national suicide prevention strategy and similarly an active community-based suicide prevention programme. In Europe, Optimizing Suicide Prevention programs and their Implementation in Europe (OSPI Europe) has developed a four level approach to prevent suicide which includes:

a) training and practice support for primary care physician,
b) public relations activities
c) Training sessions on depression and suicidality
d) establishment of helplines and support of self -help activities.

This multi-level approach has shown good evidence in prevention of suicide in Europe. Similar programme was introduced in Japan in 2001 which included four actions namely raising awareness, increase opportunity for mental health consultation, creating supportive environment for mental health promoting and promoting primary and secondary prevention of depression.

In India there is no national suicide prevention strategy and a comprehensive community-based suicide prevention programme. However, India has the infrastructure to develop and run a community-based suicide prevention program. Over the past decades through national mental health policy and programme, many districts in India are covered and mental health facility of various levels are established which includes psychiatrist, psychologist and social workers. Using the current mental health framework and infrastructure, a suicide prevention team constituting various government sectors and private partnership should be formed. This team should evaluate the suicide epidemiology of the community and formulate effective interventions to prevent suicide.

Some of the evidence-based community suicide prevention programme:

a. Restricting pack sizes of paracetamol and salicylates in United Kingdom
b. Restriction of hazardous pesticides in Sri Lanka
c. Media guidelines in Vienna
d. Gun control in United States of America and Australia
e. Barrier installation to prevent railway suicides in Hong Kong

Conclusion

Suicide is a public health issue and thus prevention strategies against suicide should have public health approach. In India there is no national suicide prevention strategy and a comprehensive community-based suicide prevention programme. However, India has the infrastructure to develop and run a community-based suicide prevention program.

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Chapter 7

Child and Adolescent Mental Health - Community Perspective

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HIGHLIGHTS

- In India, children and adolescents constitute nearly 40% of population. CAMH issues have a prevalence of 7-12% (NMHS Survey, 2017)
- Currently, there are multiple challenges to effective service delivery in India- lack of uniform policies, funding, trained manpower, and lack of awareness in general
- Delivery of CAMH services into the community can be achieved through DMHP programs, and involvement of all key stakeholders

Introduction

Child and adolescent mental health is an important public health issue across the world, more so in developing countries such as India. Optimal child and adolescent mental health includes mental, social, and emotional health of all infants, children and adolescents, including those with developmental disorders, physical disabilities, and chronic medical conditions. This chapter aims to give an overview of the extent of the problem of CAMH in India, targets and approaches recommended by experts and organizations, existing child mental health policies and programs in India, challenges and way ahead.

Extent of Problem

Worldwide 10-20% of children and adolescents experience mental disorders (1). In India, where children and adolescents constitute 37.05% of the Indian population (2011 Census), overall prevalence rates of psychiatric disorders range from 0.48% to 29.40% in community-based studies and 3.23% to 36.50% in school-based studies (2). Prevalence rates of common psychiatric disorders and psychosocial issues affecting children and adolescents in India is given below:

Table 7-1: Epidemiology of Child and Adolescent Mental Disorders

CAMD			Prevalence rate (%)	Type of study
Neurodevelopmental Disorders	Intellectual Developmental Disorder		1.4	Cross-sectional community-based (3)
	Autism Spectrum Disorder		0.12-0.14	Systematic review and meta-analysis (4)
	Specific Learning Disorder		3.08	Cross-sectional school-based (5)
Internalizing Disorders	Depression		0.1-6.94	Review of cross-sectional community based studies (6)
	Anxiety disorders	Specific isolated phobias	2.9	Cross-sectional community-based (3)
		Social phobia	0.3	
		Generalized anxiety disorder	0.3	
		Social anxiety disorder	0.1	
		Agoraphobia	0.1	
		Panic disorder	0.1	
Obsessive compulsive disorder			0.1%	Cross-sectional community-based (3)
Suicidal behaviours	Suicidal ideation in adolescents		21.7	Cross-sectional school-based (7)
	Suicidal attempt in adolescents		8	
Externalizing Disorders	Hyperkinetic disorders		1.6%	Cross-sectional community-based (3)
	Oppositional defiant disorder		0.9%	
	Conduct disorder		0.2%	
Substance Use	Alcohol	Rural	7.37	Cross-sectional school-based (8)
		Urban	5.23	
	Tobacco	Rural	8.6	
		Urban	11.04	
	Illicit Substances	Rural	6.14	
		Urban	0.6	
Abuse	Exposure to violence		57.6	Cross-sectional school-based (9)
	Physical abuse		73.9	
	Emotional abuse		73.4	
	Sexual abuse		19.9	
Child marriage (<18 years)	Females		27	NFHS-4 (10)
	Males		4	
Teenage pregnancy (15-19 years)			7.9	NFHS-4 (10)
HIV in adolescents			8.5	Retrospective record-based (ICTC)

Service Needs

Children and adolescents constitute approximately 40% of our national population, which is approximately 300 million people. The recent National Mental Health Survey reported the prevalence of mental health issues in children and adolescents aged 13-17 years at approximately 7.3%. Overall 8-13% of children are in need of mental health services. Experts predict that, Covid-19 impact will increase the occurrence of mental health morbidity among children. It is estimated that <1% of the children and adolescents suffering from mental disorders receive treatment (13).

CAMH services are limited and mostly restricted to urban areas, and adequate services devoted to mental health promotion, prevention and early intervention programs are lacking. Disorders requiring multi-specialty care like learning, speech, visual, hearing, and personality disorders are even less accessible (14). Factors contributing to this mental healthcare gap include stigma and lack of awareness, limited material and human resources, lack of effective public health leadership and insufficient research capacity.

Targets and approach suggested by International Organizations and Experts - Low And Middle Income Countries (LAMIC) (15-18)

Children and adolescents in low and middle-income countries (LAMIC) constitute 35-50% of the population and therefore CAMH is crucial in these countries to unlock their demographic dividend.

WHO Programmes for CAMH include:

a) WHO 2013-2020 Mental Health Action Plan
b) WHO Global Strategy for Women's, Children's and Adolescents' Health 2016-2030
c) Global Accelerated Action for the Health of Adolescents (AA-HA)
d) Mental Health Gap Action Programme (mhGAP)

Policy and research recommendations to strengthen community CAMH services

- strengthening and implementing mental health policies, laws and programmes,
- resource planning and allocation, stakeholder collaboration, increased inter-sectoral collaboration
- strengthening and empowerment of people with mental disorders and psychosocial disabilities and their organizations
- Setting up an active surveillance system for mental health and suicide, research and a mental health information system to collect data and plan interventions is needed.
- Structural barriers to mental health such as gender inequalities, lack of educational opportunities, conflict and displacement, and poverty should be reduced.

- Inclusion of mental health services in insurance schemes and financial protection for socioeconomically disadvantaged groups should be planned.

Inputs on strengthening of system and human resources

- Building community-based mental health services, outreach services, home care, emergency care and community-based rehabilitation and supported-housing. Electronic and mobile technologies can be used to facilitate this.
- Integrating child mental health tasks in primary health care should begin at the antenatal level.
- Building specialist capacity and engaging them in research, advocacy and within a stepped care service structure along with training, supervision and support, of GPs and pediatricians in the detection and treatment of CAMD is required.

Community approach and enhancing participation

Community approach through capacity building at the level of parents, children and adolescents, primary health care workers, teachers, grass-root workers and volunteers is recommended, using both universal and targeted interventions for promoting mental health and preventing mental disorders. This includes parenting interventions and pre-school education, adequate education and life skills programmes, good physical health and participation of local members of the community. Sangath is one such NGO, which has implemented a range of early child development, school-based and community-based youth mental health promotion programmes in India. Removing societal barriers to mental health through raising awareness in the community and reducing stigmatization and discrimination is needed. Children and adolescents can themselves be agents of change in implementing this. Awareness of risk factors for CAMD like gender issues, maternal mental health and intimate partner violence is also important.

Evidence-based interventions

- In early childhood, interventions like stimulation programmes, improving carer responsiveness, integrated nutrition, health, high-quality preschool education and conditional cash transfers to families have been seen to be beneficial.
- Teacher training, social-emotional curriculum and behavioural parent and child training interventions has been found to be helpful in behavioural disorders
- Structured activities, school based physical activities and psychosocial interventions have been found to be helpful in emotional disorders.
- For intellectual disorders, maternal and child nutritional and micronutrient supplementation, immunisation programmes, reduction of exposure to environmental tox-

ins, prenatal and perinatal maternal health interventions, malaria prevention, and early stimulation programmes are recommended.

- Brief interventions for harmful substance use, programmes to address domestic violence and preventing abuse by strengthening community child protection networks is also recommended by WHO.

Existing Child Mental Health Services in India - Current Status

There has historically been little attention to CAMH in India but, in the past decade, both child mental health and adolescent health have received increasing attention in policy and programs and multiple interventions are planned by NGO's, government policies, states and institutions/professionals.

- One of the earlier efforts were establishment of the first **child guidance clinic** in 1937 and the establishment of Indian Council for Mental Hygiene in the 1940s.These clinics **targeted with** providing help to children with behavioural problems, learning difficulties, mental retardation and providing guidance to parents for care of children. Till the 1980s, there were 120 child guidance clinics in India, which were operated by 400 caregivers.
- However, multiple policies and programs were developed at national and state targeting some of the CAMH problems. We will discuss each of them in the format of target problem, national level policies or legislations to address them and subsequent programmes developed at each level and a brief overview of interventions provided at community level and implementation issues as applicable.

Table 7-2: Summary status of policies, programs & their implementation (for children and adolescent mental health issues)

Target Problems	Policies/Aims	Programs	Community Level Interventions	Implementation
Neurodevelopmental Disorders a) Intellectual Developmental Disorders b) Autism Spectrum Disorders	Rights of Persons with disability Act 2016 (it has replaced Person with Disabilities Act, 1995) National Trust for Welfare of Persons with Autism, Cerebral palsy, Mental retardation, Multiple Disability Act (NTA),1999 Rehabilitation Council of India Act, 1992	National Policy for Persons with Disabilities(2006) Accessibilty India Campaign (flagship programme for creating barrier free environment in 2015) UDID project (creates national database for persons with disability and a transparent mechanism for issuance of disability certificate) National Action Plan for Skill Development.	a) Prevention of disabilities b) Rehabilitation services including - **Physical rehabilitation** - early detection and intervention, counselling and medical intervention, provision of aids and appliances **Educational rehabilitation -** vocational education, Sarva Shiksha Abhiyan (6-14 years) and Integrated Education for Disabled Children (IEDC) Scheme (15-18 years) **Economic rehabilitation -** employment in government institutions, self employment, disability certificate, social security (tax relief, pension).	As per 2016 statistics, 61% of the disabled children aged 5-19 years are attending educational institution (urban> rural) At all India level, 36% of the total disabled persons are workers. Of the total disabled population, nearly 55% (1.46 Cr.) are literates.

Specific Learning Disability	The Rights of Persons with Disability Act, 2016- contains 19 disability conditions including Specific Learning Disabilities.	The Act describes measures for early detection of SLDs in children and taking suitable pedagogical and other measures to overcome them.	However across nation, only 4 states – Maharashtra, Karnataka, Kerala and Delhi that have taken various measures for the identification and diagnosis and certification of SLDs in India.	Need of a uniform national level program/ policy for diagnosis, assessment and certification of LD's. Creating awareness Provision of concession and special schools.
Emotional and Behaviour Disorders	Mental Health Care Act 2017 (replaced the Mental Health Act, 1987) WHO mental health advisory to improve mental health care in developing countries.	National Mental Health Program (NMHP,1982) District Mental Health Program (DMHP).	Ensure availability and accessibility of mental health care and community participation in general population Included some aspects of counselling in schools and life skills education in 2001	Majority of implementation is happening in states under domain of DMHP in- **Karnataka** - "strengthening primary and secondary level child and adolescent mental health services in Karnataka-a training project"- training workshops and capacity building of

				DMHP for better identification and management of common childhood mental health issues in december 2018 **Kerela –"Thalir"** is DMHP program focusing on Sensitization/awarene ss for parents, teachers, children regarding child and adolescent mental health issues through a designated psychologist.
Childhood and Adolescent Trauma and Abuse	The Immoral Trafficking (Prevention) Act (ITPA), 1956 The Child Labour (Prohibition and Regulation) Act,1986 The Juvenile Justice Act 2000 and Amendment Act-		The act prohibits commercial sexual exploitation and all cases relating to prostitution in a minor registered under the Act. The act prohibits the engagement of children in certain employments and regulates the conditions of work of children in certain other employments.	

	2006,2015 (details of each given in interventions column) Protection of children from Sexual Offences Act (POCSO), 2012		The act formulates laws relating to juveniles in conflict with law (juvenile who is alleged to have committed an offence) and provide proper care and protection for children in need in child-friendly approach	
Health Promotion	Health and nutrition Education of children Early development of child Life skills education and creating awareness	Includes Pulse Polio immunisation program (PPI), Reproductive and Child Health Programme (RCH) Includes Right of Children to Free and Compulsory Education (RTE), Sarva Shiksha Abhiyan Scheme (SSA) Includes Integrated Child Development Scheme (ICDS), Rashtriya Bal Swasthya Karyakram (RBSK).	PPI covered immunisation for all children below 5 years. RCH provides effective maternal and child health care, micronutrient interventions for vulnerable groups, reproductive health services for adolescent. RTE provides the right of children to free and compulsory education in the neighbourhood school which are to be established within 3 years time period. SSA provides free and compulsory elementary	

		Includes Adolescence Education Program (AEP), Rasthriya Kishor Swasthya Karyakram (RKSK), School Health programme under Ayushman Bharat Programme.	education to all children in 6-14 age by 2010. ICDS lay foundation for proper psychological, physical and social development of the child, improve health and nutritional status of children below six years of age, reduce malnutrition and school dropouts. RBSK early detection and management of 4D's at birth-Defects at birth, Diseases in children, Deficiency conditions, Development delays. All 3 programs focused on life skills education, awareness of adolescents about health needs and school based intervention programs.	

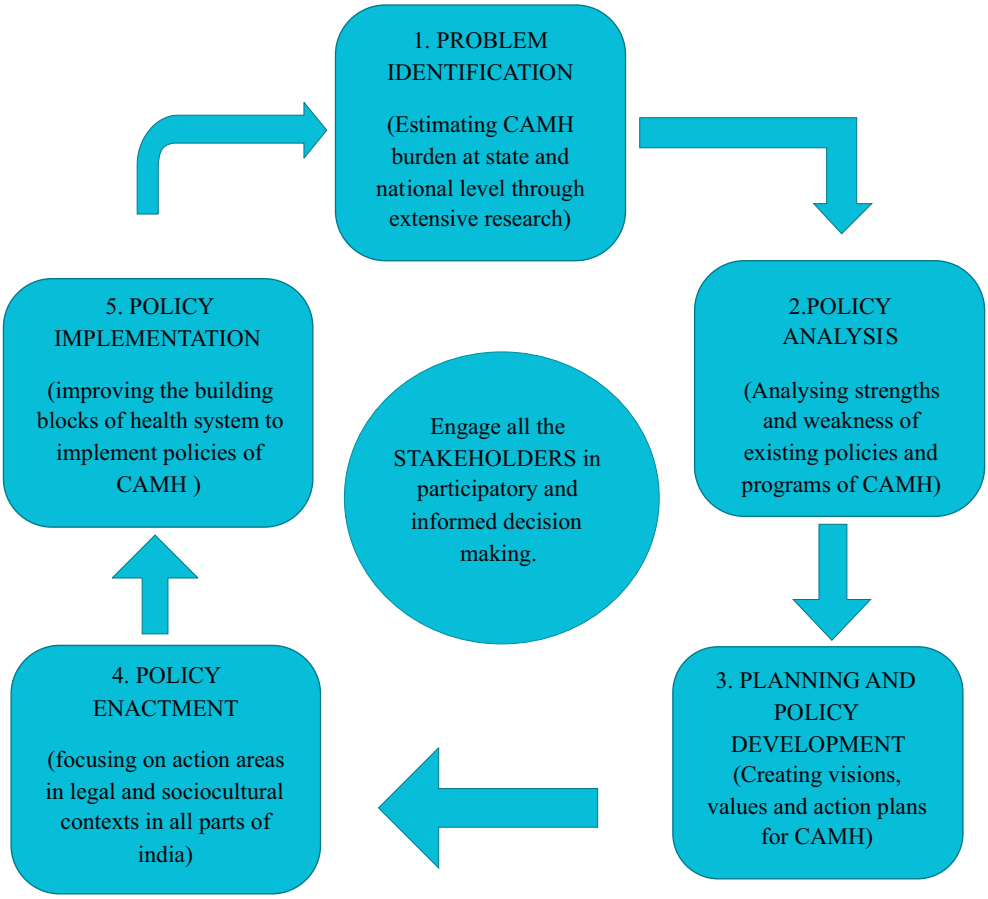
Challenges in delivery of Community CAMH Services

a) Lack of a comprehensive national policy to address CAMH disorders - leads to poor implementation across states
b) Lack of sufficient trained professionals like psychiatrists, psychologists and unequitable distribution of manpower in urban areas.
c) Lack of appropriate epidemiological data and lack of standardized instruments to assess the prevalence.
d) Lack of awareness and stigma associated leads to poor utilization of services
e) Financial constraints and limited funding of programs (As per a review in 2020, only 0.06% of the total national health budget is allocated to mental health, which is even lower than the average mental health budget in low-income countries).
f) Lack of intersectoral coordination between various departments and ministry leading to little efforts in collaboration and poor implementation.
g) Insufficient programs to address concerns of children in difficult circumstances- such as, vulnerable or marginalized children (eg. Homeless/street children, institutionalized children or sexual minorities), children with disabilities, victims of childhood neglect and abuse
h) Lack of structured programs for psychosocial interventions or training of caregivers to provide home-based support

Way Ahead

India lacks a robust policy to address CAMH needs of the country. Effective service delivery would require integration of policies at various levels- to increase health-care expenditure, to expand training of manpower and de-specialisation of service delivery, and to ensure service outreach to marginalised and vulnerable groups. It is the need of the hour to acknowledge this gap and set CAMH as a priority to ensure the future prospects of the country.

The below suggested framework and allied components are adopted from the Centers for Disease Control and Prevention Guidelines and WHO's CAMH policy and plan framework- inclusion and awareness of ach of this factors is necessary to develop a comprehensive program.



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Chapter 8

Geriatric Mental Health – Community Care

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HIGHLIGHTS

- There is a steady increase in epidemiological studies related to psychiatric morbidity in older adults particularly depression followed by cognitive disorders in India
- There is still a paucity of community-based studies on schizophrenia, bipolar disorder, anxiety disorders and suicide in older adults from India.
- Globally there are newer research studies on targeted interventions including preventive interventions at the community level for cognitive disorder and depression in older adults.
- There is emerging research on age-friendly community and centres for healthy ageing.
- In India, there are initial efforts for age friendly communities, resource building for elderly care and community level interventions.
- Community geriatric psychiatry development in India is key for tackling the mental health issues of ever increasing greying population in India.

Introduction

Ageing of the population is one of the most significant demographic change in the world including India. The population of older adults in India has grown from 5.3% in 1951 to 9% in 2011 and is projected for to grow as 12.4% in 2026. The population of older adults aged 60 years and above increased from about 20 million in 1951 to 77 million in 2001 to 103 million in 2011, and is expected to increase to 150 million in 2025 (1,2). With an increase in the absolute number of older adults in India along with changing family structure, poor social security systems in late life and increase in chronic medical illness, increasing stress level due to daily hassles and disasters such as COVID19 pandemic will certainly increase the risk of mental health issues in older adults (3-5). With a steady increase in the number of older adults with mental illness, cognitive impairment, disability and dependency geriatric mental health is emerging as a public health concern (6). In view of the limited trained professionals for geriatric mental health care, inadequate awareness and stigma about these conditions, the mental health care service for this population is reaching only a small proportion of severe and acute mental illness (7). This might lead to ignoring management of subsyndromal

mental illness, focussing of preventive intervention and rehabilitation of older adults. In the current chapter, we have discussed the community geriatric psychiatry related developments globally, as well as in India, community-based activities for geriatric mental health care at NIMHANS and epidemiological studies related to the mental illness of older adults in the last two decades.

Community Geriatric Psychiatry

Community psychiatry is the field of psychiatry that deals with providing community mental health services to the persons and families with mental illness within the community using community resources (8). In India, nearly 70% of older adults reside in villages. High treatment gap of around 90% has been reported in the National Mental Health Survey, 2016. However, the current existing geriatric mental health services are urban centred and provide services to a minority of older adults with mental health issues. There is a need to develop resources at the community level to reach the older adults in villages and remote places. These include strengthening mental health resources at the community level as a feasible way to reach the majority of the older adults in providing mental health care. Other important approach includes integrating/utilizing the existing general health care system to deliver the geriatric mental health services with appropriate training. In addition, community-level intervention such as mental health promotion, prevention interventions related to mental health, adopting healthy lifestyles and management of chronic medical illness will certainly decrease the risk of mental illness. In the last two decades, there are strides in terms of preventive and targeted interventions with regard to dementia at community level. In India, the research related to interventions at community level are sparse and only in the recent years, there is felt need for community level interventions for older adults for the prevention of mental illness and dementia in older adults.

Global Context

The World Health Organization (WHO) defines healthy ageing as 'the process of developing and maintaining the functional ability that enables wellbeing in older age'. The WHO has declared the decade of 2020- 2030 as the 'Decade of healthy ageing'. WHO has proposed the action plan for the 'Decade of healthy ageing' in the following four areas - change how we think, feel and act towards age and ageing; ensure that communities foster the abilities of older people; deliver person-centred integrated care and primary health services responsive to older people and provide access to long-term care for older people who need it (9). In 2002, the WHO had released a policy framework on active ageing. Active ageing policy is defined as 'optimizing opportunities for health, participation and security in order to enhance the quality of life as people age'. A progressive step in that direction is the ageing-friendly cities. This is aimed at recognizing the greater diversity among older persons,

promoting their inclusion and contribution in all areas of community life, respecting their decisions and lifestyle choices, and anticipating and respond flexibly to ageing-related needs and preferences (10). The age-friendly communities have been described as those that promote equal participation, independence and health in older adults.

Indian Context

Community based epidemiological studies on Mental Health of older adults (India)

Factors such as the exclusion of older adults in studies or considered as an extension of adults, lack of age-standardised tools till two decades ago, led to a paucity of methodologically good epidemiological studies focusing on older adults alone. In the last two decades, focused epidemiological studies are now being carried out and data on mental health morbidity is emerging. Majority of epidemiological studies were carried out of geriatric depression. There are fewer community-based studies on dementia, mild cognitive impairment, suicide, substance use and elder abuse. There is very little literature on very late-onset schizophrenia, Bipolar disorder and anxiety spectrum disorders. There is heterogeneity in prevalence among the studies due to difference in the instrument used and criteria used for diagnosis. The community based epidemiological studies done on mental health morbidity in India in the last two decades are shown in Table 8-1.

The Longitudinal Aging Study in India (LASI)

LASI is a nationally representative, longitudinal survey to examine then implications of ageing and retirement among India's 45 years and above population. This project is a collaboration of the Harvard T.H. Chan School of Public Health, the International Institute for Population Sciences (IIPS) in Mumbai, India, and the University of Southern California (USC) (11). This study is modelled on the longitudinal studies focused on health and retirement across the globe.

Scheme for National Action plan for senior citizens

National Action plan for senior citizens launched by the Department of Social justice and Empowerment, Government of India mentions the vision, mission and the plan of action of the Government of India for welfare and well-being of senior citizens in our country. The action plan is said to bring together each of the current schemes, future plans, strategies and targets and maps it with schemes/programmes, accountabilities, financials and clear outcomes. This Plan takes care of the top needs of the senior citizens (financial security, food, health care and human interaction /life of dignity). There are sub-schemes under this scheme. These include Scheme of Integrated Programme for Senior Citizens, State Action Plan for Senior Citizens and Convergence with

Initiatives of other Ministries/ Departments in Government of India in the field of Senior Citizens welfare (12).

National Program for the Health care of Elderly (NHPCE)

National Program for the Health care of Elderly (NPHCE) was launched by Government of India in 2011, in the context of India being a signatory to the United Nations conventions on the rights of persons with disabilities (UNCRPD). The Vision of the NPHCE are: (1) To provide accessible, affordable, and high-quality long-term, comprehensive services to an ageing population; (2) Creating a new "architecture" for Ageing; (3) To build a framework to create an enabling environment for "a Society for all Ages;" (4) To promote the concept of Active and Healthy Ageing. This program also involves the training of medical and paramedical (Asha workers, health workers) and family caregiver for providing service to older adults (13).

Community based intervention studies

Late-life depression is an important contributor to morbidity in older adults. Interventions at the community level are essential in the prevention of late-life depression. In a pilot randomised controlled trial for the prevention of late-life depression, older adults with sub-threshold depressive symptoms were randomised to intervention versus treatment as usual. The interventions included Problem Solving Therapy (PST), Brief Behavioural Therapy for Insomnia (BBTI) and self-management of chronic medical illness. These interventions were delivered by lay health counsellors. This study demonstrated the feasibility, acceptability and efficacy of applications of preventive interventions in the community using a task sharing approach through trained lay counsellors (14).

Kerala state initiative on Dementia

Increasing number of persons with dementia, is becoming a public health concern in Kerala due to higher proportion of older population in Kerala than the national average. Kerala became the first state to launch a state-wide dementia initiative in 2014 by the Government of Kerala, Social Justice Department (SJD) and the Alzheimer's and Related Disorders Society of India (ARDSI) It has several components including creating dementia awareness among all sections of the society, equipping health personnel and professional caregivers with knowledge and skills for dementia care, establishing memory clinics for diagnosis and care of people with dementia, opening care homes and day-care centres in all districts for patients with dementia (15).

Urban Community Dementia Services- Cochin

Urban community dementia services were started a pilot project for developing community-

based comprehensive healthcare services for patients with dementia. It was situated at South Kalamassery- a small town 10 kilometres from the city of Cochin. This centre provided healthcare to about five thousand elderly people of thirteen divisions of the corporation of Cochin. The project started in January 1996. The main objectives were: (1) To identify the persons with dementia (2) To provide comprehensive healthcare which included domiciliary care, day care, medical and psychiatric services to the persons with dementia (3) To train community geriatric health workers (4) To organise support groups and (5) To disseminate information about dementia (16).

Comprehensive Dementia Care Project – Palarivattom - Cochin

The centre was located at the centre of the city of Cochin. In this project, trained volunteers from the community were utilised for identifying people with dementia and their needs assessment. The interventions included domiciliary care, daycare, support groups and helpline. Community care was implemented through community geriatric health workers under the supervision of trained nurses. Training program for carers were be given by the National Institute of Social Defence (NISD) (16).

NIMHANS

NIMHANS has taken many initiatives to extend services at the community level for well-being of older adults.

Srinivaspura Ageing Neurosenesence and Cognition Study (SANSCOG)

The SANSCOG study is an initiative by Centre for Brian Research (CBR) in Indian Institute of Science in collaboration with NIMHANS and Sri Devaraj Urs Medical College, Kolar. This study is a prospective community-based cohort study with long term follow-up for a comprehensive evaluation of the risk and protective factors associated with cognitive changes due to normal ageing, Alzheimer's disease and other related disorders. The Srinivaspura taluk in Kolar district of the state of Karnataka is the site of the study. The study cohort (n=10,000) comprising of cognitively healthy individuals without dementia in the age group of 45 years and above will undergo detailed assessments comprising of clinical, neurocognitive, lifestyle, anthropometric, biochemical, genetic and multi-modal neuroimaging measures at baseline and periodic follow up (17).

Age Friendly Karnataka

The constitution of India has made several general as well as specific provisions to ensure the well-being of the elderly. However, older adults face many barriers in utilising welfare measures and legal rights. National Legal services authority (NALSA) Legal services to Senior Citizens Scheme was started in 2016 for the benefit of older adults. The Primary goal of NALSA is to spread legal

awareness about the laws and administrative measures and programmes intended for older adults. The Objectives of NALSA includes: outlining the basic rights and benefits that should be accorded to senior citizens, strengthen legal aid and representation at the national, state, district and taluka levels for senior citizens, ensuring access to various Governmental schemes and programs to the senior citizens, ensuring that the authorities and institutions such as the Tribunals and the appellate tribunals under the Maintenance and Welfare of Parents and Senior Citizens act, 2007, old age homes for senior citizens have been established, to create and spread awareness about the rights and entitlements of the senior citizens under the various laws and Governmental schemes and programs through the District Legal Service Authorities, Taluka Legal Services Committees, panel lawyers, para-legal volunteers, students and legal services clinics, to enhance capacities at all levels of panel lawyers, para-legal volunteers, volunteers in legal services clinics, government officers tasked with the implementation of the various schemes, service providers, police personnel, non-governmental organizations by organizing training, orientation and sensitization programs, to undertake research and documentation to study the various schemes, laws etc to find out the gaps, the needs and to make suggestions to the appropriate authorities. For the effective implementation of NALSA, Karnataka State Legal Services Authority and NIMHANS has collaborated to improve the services to older adults. NIMHANS was notified as the Nodal Centre for implementation of NALSA Legal Services to senior citizens Scheme, 2016 in Karnataka. Through this programme a joint initiative to promote 'Age Friendly Karnataka', which is in line with the World Health Organization' initiative of the 'Age Friendly Communities' was launched by Karnataka State Legal Services Authority, NIMHANS and the Karnataka Sate Resource Centre for Senior citizens, Government of Karnataka. The vision of the 'Age Friendly Karnataka' is to promote the well-being of all senior citizens through promoting respect, rights and safety. The program was started as a pilot project at Kolar district, Karnataka. The pillars of 'Age Friendly Karnataka' are Campaigning and Awareness promotions, Community involvement, Legal services, Health camps, Networking and Advocacy, Volunteering (18).

Free Legal Services for Senior Citizens

NIMHANS has been conducting “Free legal aid' clinic for psychiatric as well as neurological ill patients with collaboration with Karnataka State Legal Services Authority (KSLSA) since 2011. Recently this service has been expanded to provide free legal services to older adults according to the mandate covered by Legal Services Act, 1987. It also provided services to older adults. Older adults who are found to have legal issues during assessment in the geriatric unit are referred to legal Services. This service is available on the working days (18).

State Level Resource centre for Senior Citizens

This is another initiative started at NIMHANS for the welfare of older adults. The resource centre for older adults started as a proposal from collaboration from the Directorate for the Empowerment of Differently Abled and Senior Citizens, Government of Karnataka. The purpose is to provide information and promote awareness on various schemes and services for senior citizens including 'The Maintenance and Welfare of Parents and Senior Citizens Act, 2007' (18).

Dementia ECHO

Dementia ECHO is an online certificate training program for the general physician on dementia. The program covers diagnosis, clinical features, psychosocial aspects and management of dementia. Each session involves case presentation followed by a discussion on case as well as theory. The sessions are followed by assignments to the participants. The final certificate is issued based on participation, submission of cases and assignments. Dementia EHCO is a resource building measure in geriatric mental health care in India (19).

iSupport

iSupport is an online training and support program for caregivers of dementia. This program is intended for caregiver of dementia in low income countries including India. The intervention is delivered through an interactive online consists of information, skills training, problem solving and address the needs of caregivers. The online program consists of five themes: what is dementia, being a caregiver, caring for me, providing everyday care, dealing with challenging behaviours. In a randomised control trail, iSupport was found effective compared to only receive education related to dementia (20).

Training of caregivers

This is another initiative as a resource building measure for the care of older adults. As per the India dementia report, there are 3.7 million people with dementia and it is estimated to increase to 14.5 million by 2050 who require care. The responsibility of caregiving in India is mostly dependent on the family caregivers and minority are able to hire formal caregivers. Health and social care systems for the care of older adults is significantly less developed in India compared to many other developed countries. Considering all these factors, there is a need for training programs for caregiver on mental health issues of older adults. Geriatric Clinic and Services, NIMHANS has initiated certificate course training program. As an initial step, there is an assessment of needs from all stakeholders (caregivers, family members and consumers). The training of caregivers on mental health issues will be in addition to the training on handling physical health problems and basic nursing care of older adults. This training program will increase the competency among the

caregivers. This will also reduce burnout and high turnover among the caregivers.

Vayomanasa Sanjeevini

'Vayomanasa Sanjeevani' is an initiative started by NIMHANS to promote mental health and well-being of older adults. This program includes promoting public awareness through webinar series, creating a web-portal with educational resources, training of lay counsellors and caregivers, psychosocial care program in old age homes and geriatric telepsychiatry services. The program envisages the effective use of technology for the implementation. 'Vayomanasa Sanjeevani' program is an initiative of from the multi-disciplinary team involved the Geriatric Clinic and Services in collaboration with partners within and outside NIMHANS.

Home visits

Home visits are important part of providing clinical care to older adults in the community. Geriatric clinic and Services provided regular home visits carried out by a multidisciplinary team. The purpose of visit ranges from clinical care, crisis interventions, environmental assessment and providing home-based palliative care. A recently work by Ph.d student developed a home-based care model for older adults with dementia (21).

Table 8-1: Community based epidemiological studies on Mental illness of older adults (2001 to 2020).

Geriatric Depression						
Author, Year	**Place**	**Age cut-off**	**Sample Size (N)**	**Urban /Rural**	**Tool**	**Prevalence**
Rajkumar et al., 2009 (22)	Vellore	60	1000	Urban	ICD-10	12.5%
Jain &Aras,2007 (23)	Mumbai	60	196	Urban	GDS	45.9%
Kamble et al., 2009 (24)	Ahmednagar	60	494	Urban	Goldberg and Bridges Scale	31.4%
Singh & Misra, 2009 (25)	Delhi	60	55	Urban	BDI	19.94%
Barua & kar, 2010 (26)	Karnataka	60	627	Rural	WHO well-being, ICD10	21.7%
Seby et al.,2011 (27)	Ranchi	65	202	Urban	GDs	16.3%
Kamble et al., 2012	Ahmednagar	60	494	Urban	NA	31.4%
Dighe & Gwadhe,2012 (28)	Rahata dt., Maharastra	60	70	Rural	GDS	62.5% (Severe-11%)
Bodhare et al., 2013 (29)	Andhra Pradesh	60	190	Rural	PHQ-9	44.7% (Severe-15.8%)
Tiwari et al., 2014 (30)	Lucknow	60	45 old age homes	Urban	SPAS, SCAN, CAMDEX-R	37.7%

Reddy et al.,2012 (31)	Tamil Nadu	60	800	GDS	47%	
Arumugam et al., 2013	Adayalampattu & Chennai	60	173	Urban & Rural	GDS	Urban-41% Rural-46%
Sinha et al.,2013 (32)	Tamil Nadu	60	103	Rural	GDS	57.3% (Severe-6.8%)
Swarnalatha et al.,2013 (33)	Andhra Pradesh	60	400	Rural	GDS	47%
Radhakrishnana & Nayeem,2013 (34)	Tamil Nadu	60	400	Rural	GDS	Mild-38% Severe-21%
Abhishekh et al.,2013	Karnataka	65	70	Rural	HDRS	14.3%
Nair & Hiremath, 2013 (35)	Raichur	60	185	Rural	-	32.4%
Sundru & Goru, 2013 (36)	Andhra Pradesh	60	1200	Urban	GDS	31.7%
Tiwari et al.,2013 (37)	Uttar Pradesh	60	2146	Rural	SPAS, CAMDEC-R, SCAN	7.6%
Dumbray et al.,2014 (38)	Pune	60	100	GDS	Urban	30%
Sanjay et al.,2014 (39)	Bengaluru	60	100	GDS	Urban	36%

Goel et al.,2014 (40)	Khalapar	60	403	GDS	Urban	9.4% (Severe-3.2%)
Rajendra & Ramegowda, 2014 (41)	Karnataka	60	100	GDS	Rural	31.2%
Goyal & Kajal, 2014 (42)	Faridkot	60	100	GDS	Urban	77%
Kirubakaran & Kokilavani, 2014 (43)	Vellore	60	4258	Brink depression scale	Urban	12.7%
Sengupta & Benjamin, 2015 (44)	Ludhiana	60	3038	GDS	Urban, Rural	8.9%(U-10.1%, R-7.3%)
Hakmaosa et al.,2015 (45)	Assam	60	390	GDS	Rural	14.1%
Saikia et al.,2016 (46)	Assam	60	400	GDS	urban	17.25%
Sharma K et al.,2016 (47)	Himachal Pradesh	60	400/400	HDRS	Urban/Rural	11.8%/7.3%
Pilania et al.,2017 (48)	Harayana	60	500	GDS	Rural	14.4%
NHMS, data (49)	National representative sample	60	5590	MINI ICD10	Urban/Rural	Lifetime: 6.93 Current: 3.53
Very Late-Onset Schizophrenia like Psychosis						

Author, Year	Place	Age cut-off	Sample Size (N)	Urban /Rural	Tool	Prevalence
NMHS data (49)	National representative sample	60	5590	MINI ICD10	Urban/Rural	Lifetime:1.43 Current:0.36
Substance Use Disorders in Late Life						
Author, Year	**Place**	**Age cut-off**	**Sample Size (N)**	**Urban /Rural**	**Tool**	**Prevalence**
Goswami et al.,2005 (50)	North India	60	1117	Interview	Rural	Alcohol use- 16.3%
Ray 2004 (51)	National Survey	All age groups	40,697			Psychoactive substance -30% among middle aged and older adults
NMHS data (49)		60	5590	MINI ICD10	Urban/Rural	Any substance-27.78% Alcohol:4.07%
Dementia						
Author, Year	**Place**	**Age cut-off**	**Sample Size (N)**	**Urban /Rural**	**Tool**	**Prevalence**
Shaji et al.,2005 (52)	Kerala	>65		-	Urban	3.36
Raina et al.,2010 (53)	JK	60	1856	MMSE, EASI	migrants	1.83
Vas et al.,2001	Mumbai	>65	24488	Sandoz clinical	Urban	2.44 (AD-1.5)

(54)				assessment		
Saldanha et al.,2010 (55)	Pune	>65	2145	Community Screening Instrument	Urban	4.1
Das et al., 2008 (56)	Kolkata	60	5430	BMSE, Kolkata cognitive battery	Urban	0.8 (AD-0.38)
Banerjee et al.,2008 (57)	Kolkata	60	2720	Screening Questionnaire for cognitive dysfunction, Kolkata cognitive battery	Urban	1.28 (AD:0.34)
Mild Cognitive Impairment						
Author, Year	**Place**	**Age cut-off**	**Sample Size (N)**	**Urban /Rural**	**Tool**	**Prevalence**
Das et al.,2007 (58)	Kolkata	60	745	Neuropsychology assessment	Urban	14.89%
Suicide						
Author, Year	**Place**	**Age cut-off**	**Sample Size (N)**	**Urban /Rural**	**Tool**	**Prevalence**
Patel et al.,2012	National representative sample	>15 yrs	2684	field interview	Urban/Rural	60-60: 23.7/lakh >70:30.2>lakh
Abraham et al.,2005 (59)	Tamil Nadu	55		Verbal autopsy	Rural	189/lakh

NMHS data (49)	National representative sample	60	5583	MINI	Urban/Rural	Men:5.37 Women:6.12
Elder Abuse						
Author, Year	**Place**	**Age cut-off**	**Sample Size (N)**	**Urban /Rural**	**Tool**	**Prevalence**
Helpage India report, 2018 (60)		60	5014	Interview	Urban/Rural	25%

Future projects and programs

Advanced ageing centre at Community (Sakalavara) setting

There is a recent approval for Centre for Ageing and Mental Health at Sakalavara, Community mental health centre of NIMHANS. Under this project, there will be a 40 bedded residential care centre for Dementia care.

Survey of elder abuse amid COVID19 pandemic in India

This is a planned survey to study the prevalence of abuse in older adults in India. This will be a part of larger survey on domestic violence during the COVID19 pandemic.

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Chapter 9

Evolution of Mental Health Policy and Programs in India

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HIGHLIGHTS

- Mental and behavioral disorders have a worldwide prevalence of 10 percent in the adult population.
- The National Mental Health Survey (2016) estimates a treatment gap for all types of mental health problems: ranging from 28% to 83% for mental disorders and 86% for alcohol use disorders.
- The first draft of the National Mental Health Program (NMHP) was prepared by the expert group in February 1981 in Lucknow; launched in the country after 1982 in a phase manner.
- First National Mental Health Policy was formulated in 2014.
- The DMHP in India has seen a steady progress over the past 3 decades now covering more than 600 districts.
- For the first time in the history of NMHP, funds were granted to extend the program to taluk level as Taluk Mental Health Program, with an aim of reducing treatment gap and to penetrate deeper into communities.

Burden of Mental Health Problems

Mental and behavioural disorders have a worldwide prevalence of 10 percent in the adult population (1). Non-communicable diseases are becoming an important cause of ill health in developing countries. Out of this, the neuropsychiatric disorders contributes to the most (2). The resources to manage the burden of these disorders are insufficient and indequately used. According to mhGAP 2008 WHO, the treatment gap for the mental disorders is estimated to be more than 75 percent (3).

The National Mental Health Survey done in 2016 estimates that a huge treatment gap still exists for all types of mental health problems: ranging from 28% to 83% for mental disorders and 86 % for alcohol use disorders (4). The lifetime prevalence of mental and behavioral disorders in the surveyed population was 13.7% (4). Also, other available resources power are much less for the felt need. The median number of psychiatrists in India is only 0.2 per 100,000 population as compared to a global

median of 1.2 per 100,000 population (5). The estimates for psychologists, psychiatric social workers and nurses trained in mental health are 0.03, 0.03 and 0.05 per 100,000 population respectively as compared to global median of 0.60, 0.40 and 2.00 per 100,000 population (5). With respect to availability of mental health manpower and other resources, India lags behind the developed nations (6). Apart from the problems arising from the centralized treatment facilities, there are still multiple problems like inadequate man power, immense treatment gaps and treatment delays that pose a significant hindrance in the global mental health (7). What adds on to the burden is even if the resources are made available, there are multiple practical problems in continuing the long term care among the mentally ill persons and their families. Further on, even if adequate treatment happens, there are problems in recovery and re-integration of persons with mental illness. Hence, there is a dire need for decentralization of mental health care and capacity building for primary care personnel to deliver mental health care.

Era before National Mental Health Program

Considerable legislative progress has been made since the enactment of Mental Health Act of 1987 and the movement started was away from the mental asylum approach. The General Hospital Psychiatry Unit was established in Kolkata in 1933. The Bhore Committee recommendations led to set up of All India Institute of Mental Health (AIIMH) in 1954. The Mudaliar Committee recommended the establishment of a psychiatric clinic with 5 to 10 beds in each district (8). In 1978, Government of India embarked on an ambitious National Health policy – the "Declaration of Alma Ata" that envisioned "Health for All by the year 2000". Several other projects in India demonstrated the feasibility of primary mental health care following this Alma Ata declaration (8). for example,-

1. A set of recommendations by an expert committee of WHO where they had endorsed the strategy of integrating the mental health services into the primary care services
2. Setting up of Community Mental Health Unit as Sakalawara Project at National Institute of Mental Health and NeuroSciences (NIMHANS), Bangalore in 1975
3. Multi Country Project by WHO, "Strategies for extending Mental Health Services into the Community (1976-1981). This model of care proposed the integration of mental health services with the general health services which was developed in Raipur Rani Block of Haryana and the Department of Psychiatry at PGIMER Chandigarh was the centre in India.
4. ICMR-DST Collaborative project on "Severe Mental Morbidity" that was done to evaluate the feasibility of training of PHC staff in order to provide mental health care as a part of their routine work

Evolution of National Mental Health Program

The idea of developing National Programs for Mental Health started with World Health Organization (WHO), mental health division under the leadership of Dr. Norman Sartorius. The meeting focusing on improving the mental health care in developing countries was held in 1974 at Addis Ababa was an important landmark. In 1979, in the meeting of WHO Mental Health Advisory Group which was held in Manila, Phillipines, a formal resolution was made that urged all the member countries to develop National Mental Health Program.

India was the first major country to adopt it at the national level (9). In 1980, an expert group consisting of mental health experts came together to discuss various factors related to mental health. The first draft of the NMHP was prepared by the expert group in February 1981 in Lucknow and was also discussed at a workshop of mental health experts at New Delhi in July 1981. The final draft was submitted to the meeting of Central Council of health on 18-20th August 1982 and the NMHP was implemented all over the country in a phased manner.

NMHP- Objectives/ Strategies/ Service Component

The NMHP was launched with the stated objectives -

1. To ensure the availability and accessibility of mental health care for all in the foreseeable future, particularly to the most and vulnerable and underprivileged sections of the population.
2. Encourage the application of mental health knowledge in general health care and social development.
3. Promote community participation in mental health services development and stimulate efforts towards self-help in community.

Strategies of the Program were -

1. Integration of mental health with primary health care through the NMHP
2. Provision of tertiary care institutions for treatment of mental disorders
3. Eradicating stigmatization of mentally ill patients and protecting their rights through regulatory institutions like the Central Mental Health Authority (CMHA) and State Mental Health Authority (SMHA)

The service component comprised of Treatment, Rehabilitation and Prevention.

What followed!!

However, there were some inherent weaknesses of the program. The program gave more emphasis on curative components rather than promotive or preventive aspects; short term goals were been given more priority over long term plans. The administrative structure of the program was not

clearly outlined and lack of adequate funding was felt as major setback to the successful implementation of the program (10). The goals of NMHP were considered too ambitious to start with, and less attention was paid for its feasibility and implementation. Apart from the above mentioned, few long-standing criticism also involves risk of the initiatives dying down over a period of time, timely delivery of medications, lack of human resources, the problems of mentoring and monitoring etc.

Evolution of DMHP

To overcome the above-mentioned limitation of NMHP, an initiative was taken where the district was considered to be the administrative and implementation unit of this program. To assess the feasibility of DMHP, National Institute of Mental Health and Neurosciences (NIMHANS) undertook a pilot project (1985–1990) at the Bellary District of Karnataka. The project demonstrated the effectiveness of the program and that it is feasible to deliver mental health care services at the primary care level by training the ground level staff with the help of DMHP team. In 1995, DMHP was formulated as a strategy to implement the NMHP.

The main components of the DMHP at Bellary were-

1. Training for all primary care staff
2. Provision of 6 essential psychotropic drugs and anti-epileptic drugs at all primary health center (PHC) and sub-centre.
3. System of simple mental health case records
4. System of monthly reporting
5. Regular monitoring and feedback from the district level mental health team

The main objectives of DMHP were -

1. To provide sustainable basic mental health services in community and integration of these with other services
2. Early detection and treatment in community itself to ensure ease of care givers
3. To take pressure off mental hospitals
4. To reduce stigma, to rehabilitate patients within the community
5. To detect as well as manage and refer cases of epilepsy

The components of DMHP are -

1. Service Provision- Management of cases of mental disorders and counseling at different levels of district health care delivery system
2. Capacity Building- Manpower training and development for prevention, early identification and management of mental disorders

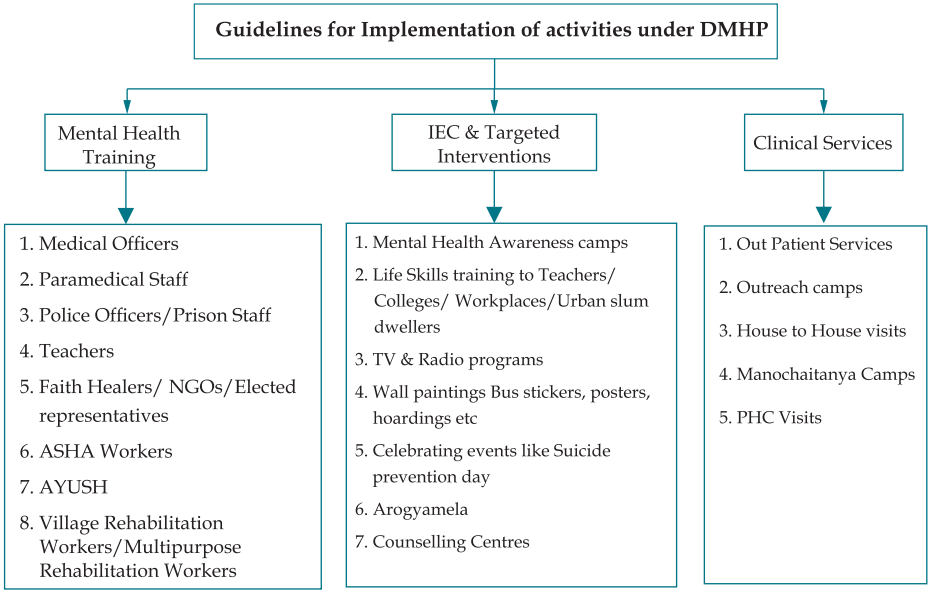
3. Awareness generation through Information Education Communication (IEC) activities
4. In order to solve the problem of shortage of man power, an effort was made in the 11th five years plan and Man Power Development scheme was made. Under this scheme, there were two schemes (Scheme A & Scheme B). Scheme A focused on developing Centers of Excellence in Mental Health Care and Scheme B focused on setting up/ strengthening PG training departments of mental health specialties.

The DMHP team usually consists of a psychiatrist, a clinical psychologist, a psychiatric social worker, a psychiatric / community nurse, a program manager, a program/case registry assistant and a record keeper.

The services provided by DMHP incorporated not only curative, but, promotive and preventive activities for positive mental health, such as:

1. Clinical services, including the outreach services.
2. Training all the ground level workers (Anganwadi workers, ASHA workers, ANMs) in identifying and referring patients with mental illness
3. Training of all the medical officers to identify and start first line treatment for mentally ill
4. IEC activities
5. Targeted interventions are being focused on life-skills education and counselling in schools, College counselling services
6. Work place stress management and Suicide prevention services

The guidelines for the implementation of activities under DMHP are summarized below -



National Mental Health Policy- Evolution and Facts

National Mental Health Program had addressed these problems partially. Owing to the enormity of existing problems, there was a need to have a strategic, holistic and integrated policy to guide future course of action including a pan India scaling of existing mental health program. In April 2011, Government of India constituted a policy group to recommend a mental health policy for the country. After minor amendments, first National Mental Health Policy was formulated in 2014. The vision of the policy is to 'promote mental health, prevent mental illness, enable recovery from mental illness, promote de-stigmatization and de-segregation and ensure socio-economic inclusion of persons with mental illness by providing affordable and quality health and social care to all persons throughout their life-span, within a rights-based perspective, proper governance and effective delivery, value-based training and teaching programs and a holistic approach to mental health. However, multiple challenges were listed and the criticisms overrode the oasis of positive reports of DMHP. Independent evaluation of DMHPs by NHRC reported that DMHP has ensured wider availability of essential psychotropic medications and that DMHP is accepted as a relative low-cost, high-yield public health intervention which is doable as shown in states such as Kerala and Gujarat (11).

Rebirth of DMHP in Karnataka & Beyond!!

As we have already seen that the Bellary model where DMHP was piloted got accepted throughout the country. Though, the model seemed to work under experimental conditions, but failed to show results in real for some period of time. Even the state of Karnataka faced a period of lull for some time (12,13), but, gained back the momentum due to multiple background factors. The DMHP in India has seen a steady progress over the past 3 decades now covering more than 600 districts. Currently the DMHP is functioning in more than 655 of the 724 districts of India.

In Karnataka, there have been many new initiatives carried out in DMHP, for example, MOU between National Health Mission, Government of Karnataka and NIMHANS in order to scale up the DMHP work, Manochaitanya Program (MCP) also called as Super Tuesdays , Maanasadhara Program, Maanasakendras , Assisted Home Care (AHC) services, the Primary Care Psychiatry Programs, E-monitoring software solution for DMHP etc.

The details are as follows -

1. Manochaitanya Program (MCP) - This program also called as Super Tuesdays provides out-patient based clinical services at Taluk hospitals by DMHP psychiatrists.
2. Maanasadhara Program- This program provides a day-care rehabilitation service facility to the severely ill patients.

3. Manasakendras- They are the half way homes meant to cater to those with Severe Mental Illnesses.
4. Assisted Home Care (AHC) services- Assisted Home Care services consist of home visits for persons with severe mental illnesses who have dropped out of treatment.
5. Primary Care Psychiatry Programs- These programs focus on handholding and training primary care doctors to identify mental illnesses and provide first line of management.
6. E-monitoring software solution for DMHP- This software has been designed to monitor the activities of NMHP regularly.

Moving a step ahead!!

The DMHP model appears as an appropriate and feasible model to deliver mental health care at the doorsteps of community throughout the country. With recent innovations and ongoing work in DMHP as is being done in the state of Karnataka like using technology for mentoring and monitoring where the non-mental health professionals at ground level are being trained in identifying mental illness and referring or providing first line of care along with e-monitoing software for monitoring DMHP activities; Taluk Mental Health Program which we will be discussing in the next section.

Taluk Mental Health Program

For the first time in the history of NMHP, funds were granted to extend the program to taluk level. The Taluk Mental Health Program (TMHP) was conceptualized in the context of vast need for public health initiatives to penetrate deeper into communities and with an aim of reducing the huge treatment gap that continues to persist. Ten talukas were sanctioned under TMHP wherein one psychiatrist and one social worker for each taluk was recruited (14). The activities include inpatient services, training, IEC activities, targeted interventions, involving faith healers and practitioners of alternative medicines, linkages with other agencies like police, judiciary, education, local welfare departments etc. to ensure a holistic mental health care are carried out. Hence, ensuring further decentralization and ongoing research activities along with a handsome amount of clinical work, this model is suitable enough to ensure mental health globally (15).

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Chapter 10

Interface of Mental Health Policy, Program, Law and Community Psychiatry

Nellai K Chithra, Guru S Gowda, Suresh Bada Math

HIGHLIGHTS

- Introduction to National Mental Health Policy in relevance to Community Psychiatry
- National Mental Health Program 1982
- Mental Health Care Act, 2017 in relevance to Community Psychiatry

The adoption of the National Mental Health Programme in August 1982 was a milestone in the history of Indian psychiatry. Such an ambitious program was formulated at a time where there were less than 1000 psychiatrists is a triumph of need for mental health care in the country (1). This program was envisioned in the absences of National Mental Health Policy. Even, the earlier legislation Mental health Act, 1987 did not align with the National Mental Health Programme or human rights commitment (2). This absences of National Mental Health Policy and non-alignment National Mental Health Programme and Mental Health Act, 1987 had impact on the development of mental health services across the country till 2014. Realizing the shortcomings of mental health care across the nation, Government of India took series of activity to mainstream the mental health services as follows;

1. Drafting of the National Mental Health Policy in 2014 (3).
2. National Mental Health Survey 2014-16 (4).
3. Mental Healthcare Act, 2017 (5) &
4. Revamping the National Mental Health Program by the policy group

This chapter focuses on the interface between National Mental Health Policy, Program, Legislations alignment with the principles of community psychiatry.

Introduction to National Mental Health Policy

National Mental Health Policy (NMHP) was published in October 2014 by the Ministry of Health and Family Welfare, Government of India. The vision of the NMHP includes the promotion of mental health, desegregation, and de-stigmatization of mental health issues and psychiatric disorders, ensuring the availability of accessible and affordable mental health care, and focusing on

the paradigms of recovery and prevention in mental health care (3). Under the broader vision, it aimed to incorporate mental health services into the primary healthcare system. While doing so, the emphasis would be on helping mentally ill people in the community. The strategy also seeks to bring about a paradigm change from acute psychiatric treatment for severely ill patients to continuous/sustainable support for all chronically ill patients. The strategy also seeks to bring about a paradigm change from acute psychiatric treatment for severely ill patients to continuous/sustainable support for all chronically ill patients. In doing so, it seeks to ensure that the level of mental health services offered meets internationally appropriate standards.

The policy also aims to promote mental wellbeing by promoting infrastructure, supporting adults through employment policies, providing residence support programmes, ensuring easy availability of reliable mental health information, raising awareness among policy makers, planners, and governments to address issues at the structural level, encouraging action to improve poor living conditions, enabling programmes to reduce risk factors women's mental health, organising gender sensitisation programs, including Ayurveda and Yoga systems. The policy aims to address problems related to stigma, discrimination, and exclusion by enabling access to care, encouraging participation in social and economic activities, preventing discrimination in work and employment policies, supporting education to improve employability, communication programmes to reduce stigma, coordinating initiatives to address substance dependence and other drug abuse. The policy aims to reduce suicide by restricting access to means of suicide, calling for responsible media reporting on suicide, decriminalising attempted suicide, educating key community leaders to identify risk factors, establishing crisis response centres and helplines, enhancing data collection, and addressing key risk factors for suicide, such as alcohol use and depression. The goal of the NMHP is to remove statutory barriers to the protection of the rights of individuals with mental illness. It seeks to increase the availability of affordable housing with the required resources for homeless people and other people with poor mental condition living in poverty and deprivation. It also seeks to introduce services to enable people with mental health issues to undertake schooling and vocational training schemes.

The main objectives of the National Mental Health Policy include (a) provision of universal access to mental health care (b) increasing access to comprehensive mental health services, such as, prevention, treatment, care, and support services (c) increasing access to mental health services for vulnerable groups, such as homeless persons, persons living in remote areas, difficult terrains, deprived sections (d) reducing impact and prevalence of risk factors associated with mental health problems (e) reducing risk and incidence of suicide (f) ensuring protection from harm & respect for rights of persons with mental health problems (g) reducing stigma related to mental health (h) to

enhance availability & equitable distribution of skilled human resources (i) to enhance financial allocation (j) identifying and addressing social, biological and psychological determinants of mental health problems (3).

National Mental Health Program 1982

The National Mental Health Programme envisioned by Government of India in 1982 (1,6) had an aim of availability and accessibility to minimum mental health care for all, particularly to the most vulnerable sections of the population and to promote community participation in service development and stimulate self-help in the community. The aim of the National Mental Health Programme also included promotion of the community mental health care through an intersectoral approach and also through integration with primary care by training the primary health workers to diagnose and treat mental disorders. On the understanding that the mental health models were too resource intensive for a small catchment area, a district-level initiative was launched in the Bellary district of Karnataka in 1983 (1). Later, Government of India adopted the Bellary model program in 1996 to operationalize and implement the NMHP, and it was called District Mental Health Program(DMHP) (1). However, in the absences of the planned policy and enabling legislation lacked the implementation of this program across the country. Now the presences of National Mental Health Program have got appropriate impetus from NMHP and Mental Healthcare, Act 2017.

Mental Health Care Act, 2017 (5)

The Mental Health Care Act, 2017 (MHCA, 2017) is an act enacted on 07th April 2017 by the Ministry of Health and Family Welfare, Government of India (5). The preamble of the act is to provide mental health care and services for persons with mental illness, and to protect, promote, and fulfill the rights of such persons during delivery of mental health care services.

Mental Healthcare Act, 2017 is progressive, patient-centric, and rights based. This is well articulated and commitment of the government is depicted in "Right to access mental healthcare" – Section 18 of the Act articulates that "every person shall" have a right to access mental health care and treatment from mental health services run or funded by the appropriate government, and government shall make sufficient provision as may be necessary, for a range of services required by Person with mental illness (7). If the government fails to provide the right to access mental health care to everyone, then it is the responsibility of the government to reimburse the costs of treatment according to section 18, 5 (f) of the MHCA 2017. Section 18 is for "everyone" because a person who is on prophylaxis (on follow-up and do not meet the criteria of PMI) can access mental health-care services and free essential medicines; a person who does not meet the criteria of PMI (had illness but

improved currently) can access a range of rehabilitation services; and another person can seek help before he/she develops mental illness (prevention and promotion). It is very important to note that only Section 18 of the MHCA, 2017 says every person has the right to access to mental health care and beyond doubt, it applies to everyone (7). The MHCA, 2017 also has provision with relevance to community psychiatry through right *to access mental health care and treatment by integrating mental health services to general health care at all the level. In addition,* it also mandates that the appropriate government shall provide for community-based establishments including half-way homes, sheltered accommodation, supported accommodation group homes for persons who no longer require treatment in more restrictive mental health establishments such as long-stay mental hospitals. It also states that long term care in a mental health establishment for treatment of mental illness should be used only in exceptional circumstances and only as a last resort when appropriate community-based treatment has been tried and failed (5).

The MHCA 2017 also mandates that appropriate government provide treatment in a manner that supports persons with mental illness to live in the community and with their families. It also mandates that every person with mental illness shall have a right to live in society and not be segregated from it. It also states that a person with mental illness shall not continue to remain in a mental health establishment owing to the lack of family support, homelessness, or due to the absence of community-based facilities. If it is not possible for a mentally ill person to live with his family or relatives due to abandonment, the appropriate Government shall provide legal aid and accommodation.

The MHCA, 2017 mandate about the r*ight to access mental health care by means that mental health services of affordable cost, of good quality, available in sufficient quantity, accessible geographically, without discrimination based on gender, sex, sexual orientation, religion, caste, social or political beliefs, class, disability or on any other basis are provided in a manner that is acceptable to persons with mental illness and their families and care-givers.* This would also include the provision to provide half-way homes, sheltered accommodation, and supported accommodation at the district level. There is also provision for mental health services to support the family of a person with mental illness or home-based rehabilitation. It also includes the provision of hospital and community-based rehabilitation establishments and services.

The MHCA, 2017 mandates that the appropriate Government shall plan, design, and implement programs for the promotion of mental health and prevention of mental illness. It also states that the appropriate Government shall plan, design, and implement public health programmes to reduce suicides and attempted suicides. It also states that appropriate measures are taken to ensure wide publicity through public media, such as television, radio, print, and online

platforms to create awareness and reduce the stigma associated with mental illness (5). The MHCA 2017, Section 115 states that any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under section 309 of the Indian Penal Code. It also states that the appropriate government shall have a duty to provide care, treatment, and rehabilitation to a person having severe stress and who attempted to commit suicide to reduce the risk of recurrence of attempt to commit suicide (5). Although MHCA, 2017 has positive side but also has negative aspects such not making provisions to bridge the treatment gap and also miserably failed to enable the family in providing treatment. There is also an urgent need to make provisions to enhance the human resources and skill building among professionals/workers in the field of mental health. The legislation fails to provide mandatory road map in filling the gap of resources and committing the government in investing in mental health (8). However, from the perspective community mental health Sec 18 of MHCA, 2017 appears to be in right direction but needs to be implemented. This should not be another law looks good on paper but languish in real life of community psychiatry.

Interface of NMHP and MHCA, 2017 for the community psychiatric care

People with mental disorders are vulnerable to abuse and violation of their basic rights. Such abuse or violation may occur from diverse elements in society including institutions, family members, caregivers, professionals, friends, unrelated members of the community, and law enforcing agencies (9). This sets an imperative for a protective mechanism to ensure appropriate, adequate, timely, and humane health care services. Such protective mechanisms include legislative provisions and policies to ensure that the rights of this vulnerable group are protected. In the undeniable context that every society needs laws in various areas to maintain the well-being of its people, mental health care is one such important area that requires appropriate policy, program and legislation (9).

Suicide

Suicide in India is considered as a major public health problem. The prevalence of suicide is 10.2 per 100000 population as per the 2019 National Crime report Beau row. In this regards the both MHCA, 2017 and NMHP recommends public health programmes, training of key community leader to reduce suicides and attempted suicides in the country and also advocate to make guidelines for media reportage of suicides. It also recommends setting up crisis centers under the District Mental Health Program (DMHP). And to support this, The MHCA, 2017 has decriminalized who attempted to commit suicide and having severe stress. Its advice to consult mental health specialists for a consultation to provide care, treatment, and rehabilitation to a person, having severe stress and who

attempted to commit suicide and to take necessary steps to prevent a recurrence (10).

Special and Vulnerable Population

The NMHP, Program and MHCA, 2017 recommend special measures to ensure the mental health of vulnerable groups, such as children (11), women, elderly (12), persons with disabilities (13), migrants, those stricken with poverty, homeless, orphans, elderly caregivers, and post-disaster population. In addition to this, The MHCA, 2017 advocate old age (12) and child mental health services (11) at the district level and provide legal provisions and responsibility of magistrate, police inspector and medical officer for admission, treatment, and rehabilitation of Homeless Person with Mental Illness. In this respect, there is a confluence of views between the policy and the act.

Preventive and Promotive Mental Health

The NMHP and MHCA 2017 also focus on promotive and preventive mental health and emphasis on awareness programs on mental illness at different stakeholders, school mental health programs, such as life-skills education, industrial mental health, positive mental health and prevention of suicides. There is a convergence of views between the policy and the act in this area (3)

Rehabilitation and disability

The NMHP identifies that disability can be due to a lack of opportunity secondary to discrimination. The NMHP and MHCA 2017 focuses on the importance of rehabilitation and recovery**.** The MHCA 2017 makes provisions for half-way homes, sheltered accommodation, hospital, and home or community-based rehabilitation and supported accommodation. The MHCA has not mentioned the provision of disability benefits, reservations in education, or jobs, as it comes under the ambit of the right to persons with disabilities act. There is a conglomeration of views between the law and the policy in this context (3)

Stigma

MHCA, 2017 and NMHP aim to address mental illness, stigma-related suicide, discrimination, and exclusion by enabling access to care, preventing discrimination in workplace and employment policies, and organising programs to address substance abuse problem and other drug abuse. The MHCA, 2017 made legal provisions such as a mental hospital have been renamed as mental health establishments. It also states that there is a need for compassion and responsibility in our interactions with Persons with Mental Illness. The act also states that nobody can classify a person as a person with mental illness except for purposes directly relating to the treatment aspect. The act further states that the determination of a person's mental illness alone will not mean that the person

is of unsound mind unless a competent court declares him/her to be of unsound mind

Primary Health Care Integration

The NMHP aims for the integration of mental health care into the primary health care system by establishing general hospital psychiatry units (GHPUs). Added to that, the MHCA also mandates integration of services at primary, secondary, and tertiary healthcare levels and all health programs run by the appropriate government. Integrating mental health care into primary health care is expected to reduce the treatment gap and carry less stigma as far as patients and their family members are concerned. The added advantage of having medical facilities include early detection and management of other medical problems. A new, refreshing development has occurred the previous year (2018–2019) in the history of the National Mental Health Program. Funds have been allocated to start mental health programs in ten taluks (tehsils) of Karnataka (14)

Human Rights

Human rights are rights inherent to all human beings, whatever our nationality, place of residence, sex, national or ethnic origin, color, religion, language, or any other status, for which we all are equally entitled to without any discrimination. They are basic entitlements and freedom based on principles of autonomy, equality, and dignity that all human beings are entitled to (15,16). However, persons with mental and psychosocial disabilities are a vulnerable section of society leading to violations of human rights at multiple levels. They are subjected to all kinds of abuse, neglect, and discrimination not only by society but by the policymakers too. The common human rights violations that happen to people with mental and psychosocial disabilities are Lack of access to basic mental health care; People are often forced to live in the psychiatric institutions for decades because there is no place for them to go and there are no long-term rehabilitation centers for persons with mental illness (17). Harmful practices can also involve abuse by faith healers and religious practitioners and patients in psychiatric institutions are often deprived of necessities like adequate food, shelter, and sanitation (18). These issues were addressed in both MHCA, 2017, and NMHP. The ethos of NMHP policy talks about equity, justice in mental health services, and a participatory, rights-based approach in planning, delivery, monitor, and evaluation of mental health services. The MHCA, 2017 under 'Rights of Persons with Mental Illness'. These includes

1. Right to access mental health care (Section 18)
2. Right to Community living (Section 19)
3. Right to protection from cruel, inhuman, and degrading treatment (Section 20)
4. Right to equality and non-discrimination (Section 21)
5. Right to information (Section 22)

6. Right to Confidentiality (Section 23)
7. Restriction on the release of information in respect to mental illness (Section 24)
8. Right to access medical records (Section 25)
9. Right to personal contacts and communication (Section 26)
10. Right to legal aid (Section 27)
11. Rights to make complaints about deficiencies in the provision of services (Section 28)
12. Persons with Mental Illness (PMI) have the right to live in the community, need not stay in the hospital for long term just because he has no family/ relatives, and the government has to establish half way homes and group homes.

Conclusion

The National Mental Health Policy, Program and the Mental Health Care Act has a conglomeration of views in most aspect of community psychiatric care like awareness programme on suicide and mental illness, stigma reduction, decriminalisation of suicide, right of a person with mental illness, vulnerable population, integration of mental health into the community, psychiatric rehabilitation provision at home, community and hospital. The NMHP, 2014, Program and MHCA, 2017 provision can improve advocacy on community psychiatric care and there is a need for a strict oversight mechanism to put into effect in India. To achieve true integration of mental health in the community is aspirational and there is a need for dialogue and common goals among various policymakers and political will to implement MHCA, 2017 (8).

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Chapter 11

Primary Care Psychiatry Program

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HIGHLIGHTS

- The term 'Primary Care' means provision of essential healthcare made universally accessible to individuals and acceptable to them
- There is neglect of psychiatric evaluation (with assessment of mood being considered as the 6th vital sign) by Primary Care Doctors (PCDs) which is reflected as a 70% treatment gap for psychiatric disorders.
- This is due to poor training in Psychiatry at the undergraduate level leading to lesser confidence in evaluating and prescribing for Psychiatric Disorders by PCDs.
- With a prevalence of Common Mental Disorders being 17 – 46%, it is thus essential to provide basic first line management and only refer if it necessitates, at the primary care level.
- Primary Care Psychiatry Program (PCPP) offers Diploma in Primary Care Psychiatry (DPCP) which is a one-year, part-time, module-based, digitally driven program for empowering PCDs to detect and manage CMDs at the primary care level
- The course is designed based on 6 principles and 8 guiding principles that ensure pragmatic real-time training for PCDs at their routine clinic.
- Clinical Schedule for Primary Care Psychiatry (CSP) is a eight (8) page document that has been validated for PCDs to easily detect and treat Psychiatric Disorders. It is used as a basic curriculum to train PCDs in the DPCP course.
- The course has the following 5 modules:
    - Basic Module (onsite)
    - Tele psychiatric "On- Consultation Training"
    - Collaborative Video Consultation
    - Virtual Classroom (VCR)
    - Public Health Module
- DPCP has 2 assessments: the formative assessment has 10 criteria whereas the summative assessment is decided based on an exit exam

- The clinical utility of the program is assessed based on the 'translational Quotient' & 'PCP quotient' which determines the effectiveness of the program
- PCPP thus aids in sealing the treatment gap of Psychiatric disorders starting at the primary car level and thereby fulfilling the objectives of NMHP using digital technology.

What is Primary Care?

Definition

The term 'Primary Care' means provision of essential healthcare made universally accessible to individuals and acceptable to them, through their full participation and at cost the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination (1).

Principle Elements:

a) Equitable distribution
b) Community Participation
c) Inter-sectoral coordination
d) Use of appropriate technology

Attributes of Primary Care:

a) Accessibility
b) Acceptability
c) Community based
d) Affordability
e) Adaptability and Appropriateness
f) Comprehensive
g) Coordination

Need for Primary care psychiatry

The principle of equitable distribution means providing resources for all basic health facilities that an individual in the community should avail as per the WHO - Alma-Ata of the primary health care (1). With a prevalence of Common Mental Disorders being 17 – 46%, it is thus essential to provide basic first line management and only refer if it necessitates, at the primary care level. Provision for evaluation and treatment of mental health cannot be an exclusion as it is highly prevalent among any chronic medical condition visiting PHCs and treating comorbid conditions would only improve the

quality of living. But there has been a neglect of psychiatric evaluation (with assessment of mood being considered as the 6th vital sign) by Primary Care Doctors (PCDs) which is reflected as a 70% treatment gap for psychiatric disorders as per recent National Mental Health Survey 2015-16 (2). The treatment gap refers to proportion of people not able to access treatment, known as "apparent treatment gap". The "functional treatment gap" specific to primary care which refers to patients suffering from psychiatric disorders but present with physical symptoms to health care settings who receive inadequate & sometimes inappropriate treatment (3). Integration of mental health services at the primary care level has always been the crux of policy makers including the WHO and NMHP of India. PHC doctors are the first contact for people of any kind of illness and sensitizing them to detect and treat mental ailments is warranted as adequate Psychiatry training during undergraduate courses is lacking (4,5).

Inception of Primary care Psychiatry Program

In conjunction with the attributes of primary care, adapting appropriate ways to effectively fulfil this task had to be formulated within the affordability of the community and the country (6). The number of PCDs outnumber mental health specialists and training them across the country is a tedious task. Laying down new capacity buildings, recruiting newer manpower and other resources will be expensive (7). This creates an avenue to implement one of the pivotal elements of primary care, i.e. 'appropriate use of technology' to smoothen the process of succeeding in the task. The Primary Care Psychiatry Program (PCPP) is an initiative from the Tele Medicine Centre, National Institute of Mental Health And Neurosciences (NIMHANS), Bengaluru, India which has now evolved into a diploma course as 'Diploma in Primary Care Psychiatry (DPCP)' as a prototype course.

Introduction to DPCP

Diploma in Primary Care Psychiatry is a one-year, part-time, module-based, digitally-driven program for practicing PCDs consisting of 3-10 days of On-site training at NIMHANS or any equivalent Institution and subsequent period of one-year distance education-based online training with mentoring by Psychiatrists from NIMHANS/equivalent Institute. The objective of the course is for capacity building of PCDs by training them in screening, diagnosing and providing first line treatment for psychiatric illnesses and in addition to refer psychiatric cases in situations of treatment resistance (3). These PCDs shall be actively practicing in government service at Public Healthcare Facilities and who shall be nominated by respective State Governments for the course with minimal disruption in their clinical workflow. A formal proposal shall be put forth to NIMHANS/equivalent Institute by the respective state governments and shall sponsor the course for their PCDs.

Principles and Guiding Principles of designing PPCP

The DPCP course of PCPP is designed based on the following Principles (8)*:*

a) It is a digitally driven course
b) It follows the principles of adult learning *(Andragogy)*
c) Training occurs in tandem with the routine clinical practice with a tag line "Earn clinical Diploma from your clinic".
d) *Bottom – up approach*: Focus on clinical skills which is carried out by a 'step by step' approach right from diagnosis, prescription and counselling
e) *Entry to Exit approach*: the doctor is trained from the point of entry of the patient into the clinic to exit- which included screening, diagnosing and writing prescription and follow-up advise
f) *Dual Outcome*: The training works on equal partnership. The PCD gets trained in Psychiatry, and the psychiatrist gets input on non-psychiatry patients.

Guiding Principles(8)

Training Location

Shift from the traditional induction training centres for PCDs (at Tertiary or District Hospitals) to real-time on-consultation training at their PHCs during routine clinical practice. This location shift has found to be acceptable (as it saves travel time and related logistic efforts), enhance skill transfer, build confidence in prescribing psychotropics and provides an opportunity for a natural clinical flow where they are exposed to a reality check of their practice.

Training Methods

The conventional Classroom Training (CRT) has not found to be effective in skill transfer and confidence rather only knowledge. Hence one-time use of lecture, didactic, PowerPoint presentation, case vignette methods and recorded video interviews hasn't served the purpose whereas training during their live, real-time consultations with both PCDs and the training tele-psychiatrist simultaneously consulting patients and collaboratively deciding on the management plan for said number of patients has found to effective.

Compatible with practicing style of PCDs

(a) With only 1.5 to 2.3 minutes being an average consultation time at Indian PHCs, the curriculum has been designed to be brief and easily applicable. (b) Use of a "monolithic treatment-protocol guided transdiagnostic approach" rather use of specialist-based diagnostic taxonomy, i.e. ICD or DSM. Monolithic treatment protocol means that prescribing the first-line medication from a

particular class of drugs for a broad range of Psychiatric Disorders, e.g. SSRI for Depression, Anxiety and Somatoform Disorders and an Antipsychotic for Psychotic Disorders.

Focus on adult population

Though psychiatric morbidity is prevalent in the paediatric population as well; majority of their presentation seems complex and management is predominantly non-pharmacological needing more time-consuming interventions. With adults being the major service users (84%) at the PHC level, targeting this group during the initial phase of the program was pragmatic as including the paediatric group shall cause more burden on the PCDs due to the reasons mentioned above.

In synchrony with prevalent practice of 'medication first' approach

Primary care consults CMDs predominantly and most treatment guidelines recommend psychological interventions as first-line management. However, in a low resource setting and predominantly poorly psychologically oriented population in India, it is impractical to follow the western recommendations. With better acceptability of medications as first-line treatment by the Indian community, the pharmacotherapy-based treatment approach would synchronize well with the pill-based practice style of busy PCDs.

Focus on the higher prevalent psychiatric disorders in primary care

As mentioned earlier, CMDs are highly prevalent at primary care ranging from 17-46%. Around 30% of the patients attending general medical care also have co-morbid CMDs. Patients with CMDs and Alcohol/tobacco seek help with for physical symptoms like sleep disturbances, lethargy, and body aches. Sensitizing PCDs for early recognition and management of these conditions would complement the specialists/Psychiatrists who are inclined towards treating more SMDs.

Point of care manual

Already available manuals lack pragmatism as they were complex, overwhelming and nothing less than shorter forms of textbooks of psychiatry making it difficult to incorporate those into clinical practice for PCDs (9). None of these manuals contain a culturally sensitive brief screener, including the ICD 10 primary care version. On the other hand, PCPP curriculum designed a brief, concise, point of care, (means, usable at the time and place of patient care) manual called "Clinical Schedules for primary care psychiatry" (CSP) for the exclusive clinical use of PCDs. Such method with on-consultation training has provided promising results in terms of knowledge acquisition, attitudinal changes and improved clinical outcomes in psychiatric cases (10).

To empower PCDs to provide first-line treatment for patients with psychiatric disorders within their general patients

The training program is designed with the motto that it shall impart a paradigm shift from 'identify and refer' to 'treat (yourself) and refer (if need)' approach for Psychiatric Disorders by PCDs.

Modules*

Clinical Schedules for Primary Care Psychiatry (CSP)

It is an eight (8) page document that consists of brief introduction on roles and expectation as a PCDs in mental health services and has been validated for use with the "screener" section demonstrating high sensitivity and specificity for primary care practice (11). It has been adopted in many states such as Karnataka, Tamil Nadu, Telangana, Maharashtra, Bihar, Chhattisgarh, Uttarakhand, etc under the NMHP. The following are the salient features of CSP manual:

a) Culturally sensitive screener
b) Adopted trans-diagnostic taxonomy
c) Simplified primary care relevant diagnostic guidelines (E.g.: duration of somatization disorder reduced to 6 months, PCDs friendly addiction diagnostic criteria)
d) Stratified medication guidelines (Medication list which has minimal side effects, lesser drug interactions, categorized PCDs dose and specialist dose for each drug to enable PCDs to choose minimally effective dose)
e) Brief counselling guide for all patients (besides, there is specific counselling to alcohol and tobacco addiction)
f) Follow-up guidelines
g) Comorbidity guidelines

Management guidelines include investigations having provision to rule out medical causes and risk factors of the psychiatric illnesses and cover essential treatment guidelines. Psychopharmacology section has a table on the essential drugs that can be used at the PHC level along with dosing and common side effects details including brief psychoeducation. The final section is on guidelines for follow ups and referral to psychiatrists in case of resistant cases which is depicted via flowchart for a quick glance (12). The CSP has already traversed through various versions 1.0, 2.0, 2.1, 2.2 and the latest version being 2.3.

Rolling out of CSP into Field work

In 2014 -15, direct mentoring was done to PCDs by the Development Team by visiting taluk general hospitals every Tuesdays as part of Manochaitanya clinic (13). The taluks visited were Anekal,

Kanakapura, Maddur, Madhugiri and Gauribidanur along with few PHCs at Gunjur. It was real-time on-consultation training (OCT) by sitting beside the PCDs who attend to patients visiting their routine out-patient services. The module consisted of 3 sessions with first session is on introduction, followed by the training module and then the consolidated session. Two PCDs attend their routine OPD, during when the Tele-psychiatrist from telemedicine logs in for tele-mentoring. While one is actively attending the cases, the other observes the proceedings. Randomly 5 patients are selected taking verbal consent. The PCDs administer the CSP by themselves and attempt to make a diagnosis and treatment plan which will be supervised by the Tele-Psychiatrist who takes up the case for discussion. This was later digitalized by making it in 'video-conference' mode via internet with the Development Team, NIMHANS logging in from Telemedicine Centre, NIMHANS and the PCDs joining in from their OPD clinic. The OCT was from then on prefixed with 'Tele' with emergence of the term "Tele – On-Consultation Training" abbreviated as "Tele-OCT". With the Pilot study at Maddur General Hospital (GH), Mandya district of Karnataka providing promising results, the model was attempted across another Taluk GH which then moved on to PHCs also. With increasing collaborators, the Hub and Spoke model was reinstated with Telemedicine Centre, NIMHANS being the hub and spokes being the PCDs at the Taluk hospitals and PHCs (3).

Clinical Module

Once the CSP module was found to be accepted, further restructuring on these lines led to the rise of the functional framework of the PCPP with the following clinical modules:

Table 11-1: Summary of clinical modules of Primary Care Psychiatry Program

B	*Clinical Modules*	
1	Basic module	Onsite, residential, 5-10 days classroom-based training (CRT) and consultation-based training (CBT)
Digital / Online Modules (Videoconference based modules)		
2	Tele psychiatric "On- Consultation Training" (Tele-OCT) module	Training at primary care clinic in a live, real-time general consultation of primary care doctors
3	Collaborative Video Consultation (CVC) Module	Online, walk-in clinic for PCDs by a tele-psychiatrist
4	Virtual Classroom (VCR) Module	Weekly one-hour multipoint verified case presentations/seminars for PCDs by a PCD or an expert in subspecialty of psychiatry relevant for primary care
5	Public Health Module	Delivering public health initiatives and designing 1 public education material

Basic Module

Training focuses on orientation to Common Mental Disorders (CMDs), alcohol use disorders and Tobacco use in addition to primary care aspects of geriatric, perinatal, child and Adolescent psychiatry. The modes of training include live demonstration of assessment of patients (at OPD, IPD & Emergency), didactic lectures, workshops, and role plays. PCDs shall also have a field visit to a nearby DMHP centre.

Tele-psychiatry "On-Consultation Training" (Tele-OCT) module

Tele-OCT includes real time online training for identification and treatment of psychiatric disorders while the PCD is attending to general patients in his/her OPD using the CSP manual.

a) Tele-psychiatrist at Tele Medicine Centre of the training Institute (hub) handholds the PCDs at their PHC/taluk hospital (spoke) to pick up Psychiatric cases as and when they attend to their routine outpatients.
b) Tele-OCT is conducted in two to three sessions for each PCDs. Each session runs until 10–15 patients are covered in days of 1st, 3rd, and 7th week.

The first session is introductory in nature (Under DPCP program the introductory session is carried during the Basic Module i.e. On-site training where hands-on training in using CSP is carried), the second contains training proper, and the third is consolidation session.

Contents of each session

1st Introductory session

- Rapport establishment
- Discussion about reality and myths about Primary Care Psychiatry.
- Discussion about CSP

Finally observing and demonstrating psychiatric consultations using CSP screener in about 5–10 patients.

2nd Training Module session

- Discussion begins with feedback about the application of skills learned in the first session and then OCT for about 10–15 patients.

3rd Consolidation session

- Discussion begins from their application of skills in their regular practice
- Fine-tuning clinical skills in another 10–15 patients

Collaborative Video Consultation (CVC) Module

a) This is an online, walk-in clinic available for PCDs wherein a Tele-Psychiatrist will provide consultation to PCDs on their request on all working days from 9 am to 4.30 pm.
b) Each PCD is expected to complete 25 such CVCs and follow-up a minimum of 5 patients for at least 3 visits in a period 6 months.
c) The goal of CVCs is to instil confidence and independence in diagnosing and treating psychiatric illnesses.

Virtual Classroom (VCR) Module

a) It involves peer learning approach. It is in a multipoint videoconference mode from PCDs place of choice.
b) Conducted in weekly one-hour online session, scheduled for didactic lectures and case conferances by the participant PCDs on various topics of the psychiatric illness.
c) The content of PCDs presentation is prepared collaboratively, prepared by presenter PCDs and vetted by a Tele-Psychiatrist before presentation suitable for primary care.
d) Expert interactive lectures in relevant sub-speciality areas of psychiatry are also arranged for benefit of PCDs.

Public health module

a) This module is designed to generate ideas, plan IEC for the district/ CHC/PHC that the PCD is working
b) Each PCD is required to
    - Conduct at-least one Public awareness program related to mental health
    - One Public education Material related to mental health

Assessment criteria: Formative and Summative Assessments*

This DPCP course also has two kind of assessment: formative and summative.

The criteria for Formative Assessment:

DPCP has 10 evaluation criteria for the training PCDs, which they are expected to complete in the one year of training. Each PCD will be evaluated throughout the year in 10 formative assessment criteria. On fulfilling the formative assessment criteria, the PCD would be eligible for the exit exam

The following are the 10 criteria that are to be fulfilled.

1. One case conference (collaborative & verified)
2. One seminar (collaborative & verified)

3. 25 CVC consultations
4. At-least 3 follow-ups for each patient for 6 months of at least 5 patients in CVC
5. Monthly patients audit of total and psychiatric disorders (TAP DAS) (called as PCPP quotient: see erika article in mail)
6. Monthly prescription audit of psychiatric medications
7. Substantial attendance for VCR/ v-CSD module (minimum 60% attendance)
8. Evaluation sessions for Tele-OCT at end of training & subsequently every 3-4 months (at least 3 evaluations)
9. Delivery of at least One public initiative
10. Designing at least One public education material

Summative Assessment

The summative assessment consists of exit exam at the end of one year of training. The Tele-psychiatrist will monitor the theory on-camera examination and the PCD is expected to finish answering in the stipulated time. Theory consists of short essay and MCQ. Clinical exam is also on-camera and similar to Tele-OCT evaluation sessions where PCDs are providing their regular OPD consultation in their general practice and evaluated by a tele-psychiatrist (who has not been directly involved in the training of the PCD) will observe and score the PCDs. Can you write up here the criteria of clinical evaluation (translational quotient). (see Erika article attached in mail).

On completing the Formative Assessment criteria and clearing summative Assessment, PCD will receive certificate and Accreditation of "Diploma In Primary Care Psychiatry"

Impact of DPCP*

The clinical utility of the program is an important measure to assess its effectiveness and the following parameters are assessed:

a) Translational Quotient
b) PCP quotient

Translational Quotient (TQ)

It measures the skills retained by PCDs who undergo Tele- OCT evaluation sessions every 3-4 months after their training Tele – OCT sessions. TQ is calculated for all the PCD scores. With current experience, TQ did not vary much when done serially suggesting adequate retention of the skills achieved.

PCP quotient

It is the number of Psychiatry cases / Total Number of patients seen in the PCD's OPD * 100

The experience from training the PCDs till date has indicated high translational quotient and good PCP quotient indicating that the training provided carried clinical utility.

Skill Set Acquired*

Module	Skill set
Basic Onsite Module	(a) Orientation to CMDs (b) First-hand experience of assessing and managing psychiatry cases in OP/IP & emergency psychiatry services (c) Observe functioning of DMHP program
Online Module	
Tele On-Consultation Training Sessions (Tele OCT)	(a) Ability to screen, diagnose, prescribe psychotropic medication and to provide brief counselling (b) Referral Skills
Collaborative Video Consultations (CVCs)	(a) Ability to collaborate for diagnosing and managing difficult cases (b) Cross-referral management skills (c) Monitoring and observing course of illness during follow-up visits
Virtual Classroom/ Video Based Continuing Skill Development	(a) Peer learning (b) Skills to present psychiatry cases and seminars

** Adopted from the DPCP Manual (14)*

Conclusion & Future Directions

The aim of primary care psychiatry programs is in line with the objectives of the NMHP, i.e. to integrate mental health services into general health care. DPCP is a novel initiative to achieve this goal. It has given a pragmatic approach to seal the treatment gap at the lowest but also the first level of care by training PCDs. With many PCDs rotating around time and now due to better career opportunities including admission to post-graduation and diploma courses, making the course a mandate as a part of induction training shall prove to be pivotal in sustaining the effectiveness of the integration. Though the program may be criticized that PCDs might over-diagnose and prescribe

psychotropics for subsyndromal ailments, research suggest that even subsyndromal conditions in primary care need clinical attention (8). With PCDs trained for prescribing the lowest therapeutic dose with minimal side-effects for common mental disorders, this shall only ensure benefits overriding the risks and for a better quality of life of the community. With already promising results of increasing rates of detection of Psychiatric cases by PCDs and psychotropic prescriptions (15), once the program is scientifically evaluated and evidenced to have effective outcome across settings and time, the acceptability, implementing the program across the country shall be the next step forward. Adding to that, this course has already been made available to all State Governments in the NIMHANS website and currently other Centers of Excellence initiated partnership to share the training responsibilities with AIIMS, Rishikesh recently joining hands to train Uttarakhand PCDs.

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Chapter 12
Community Based Rehabilitation

Daniel Ritish Paul, Chethan Basavarajappa, Channaveerachari Naveen Kumar

HIGHLIGHTS

- Community-based rehabilitation (CBR) services are provided in close proximity by specialist and locally available personnel within an explicit human rights and developmental framework
- Implementation of CBR requires a multi-stakeholder approach with combined efforts of persons with disability, their families and communities, and relevant government and non-government organization involved in health, education vocational, social and other services
- CBR as an approach does not focus only on the medical or physical needs of a person. It is also not an approach where persons with disability receive care as a passive recipient

Community-based rehabilitation (CBR) services are provided in close proximity by specialist and locally available personnel within an explicit human rights and developmental framework (WHO HEALTH ORGANISATION, 2008). It is a strategy for general community development that provides rehabilitation, poverty reduction, equalisation of opportunities, and social inclusion for all people with disabilities, predominantly using local resources. CBR aims to meet the needs of person with disability focusing mainly on health, education, livelihood, social integration and empowerment. Therefore non specialist and cost effective human resources are important pillars for implementation of CBR in the developing nations like India. One of the important barriers for providing the adequate care in the community is availability of the trained mental health professionals. CBR was initiated by WHO following the Declaration of Alma-Ata in 1978 in an effort to enhance the quality of life for people with disabilities and their families; meet their basic needs; and ensure their inclusion and participation (1). Implementation of CBR requires a multi-stakeholder approach with combined efforts of persons with disability, their families and communities, and relevant government and non-government organization involved in health, education vocational, social and other services.

CBR as an approach does not focus only on the medical or physical needs of a person. It is also not an approach where persons with disability receive care as a passive recipient. Person with

disability often require lifelong management and it is important that the steps involved should be community based as much as possible with active involvement of all stakeholders.
Community based rehabilitation settings are broadly classified as follows

Non-residential settings which provides

a) Structural daily activities
b) Support
c) Supervision for the patients in transition from hospitalization and home.

First day care centre in India was started by NIMHANS, Bengaluru with vocational training. Psychiatric rehabilitation services (PRS) at NIMHANS includes individual and group based family oriented interventions along with training in prevocational and vocational skills and providing job opportunities. Beneficiaries and families have acknowledged that various interventions at the day care centres are aimed to improve self-esteem, easy to manage, feasible to replicate at different settings with low investment. As most of the interventions are provided in scientific methods using classical conditioning behavioural principles.

Residential settings includes

a) Hospitals are for medical management, initial evaluation, and to initiate appropriate treatment.
b) Halfway homes are for patient where they are kept for limited period of time with homogeneity of diagnosis and often managed buy nonmedical staff.
c) Hostels are for people who can lead an independent life but doesn't have any family to support.
d) Long-stay homes are for patients who are not able to live independently

Objectives of CBR Programs

The report of World Health Organisation in 2003 came out with an outline of objectives for CBR programs (2). It includes

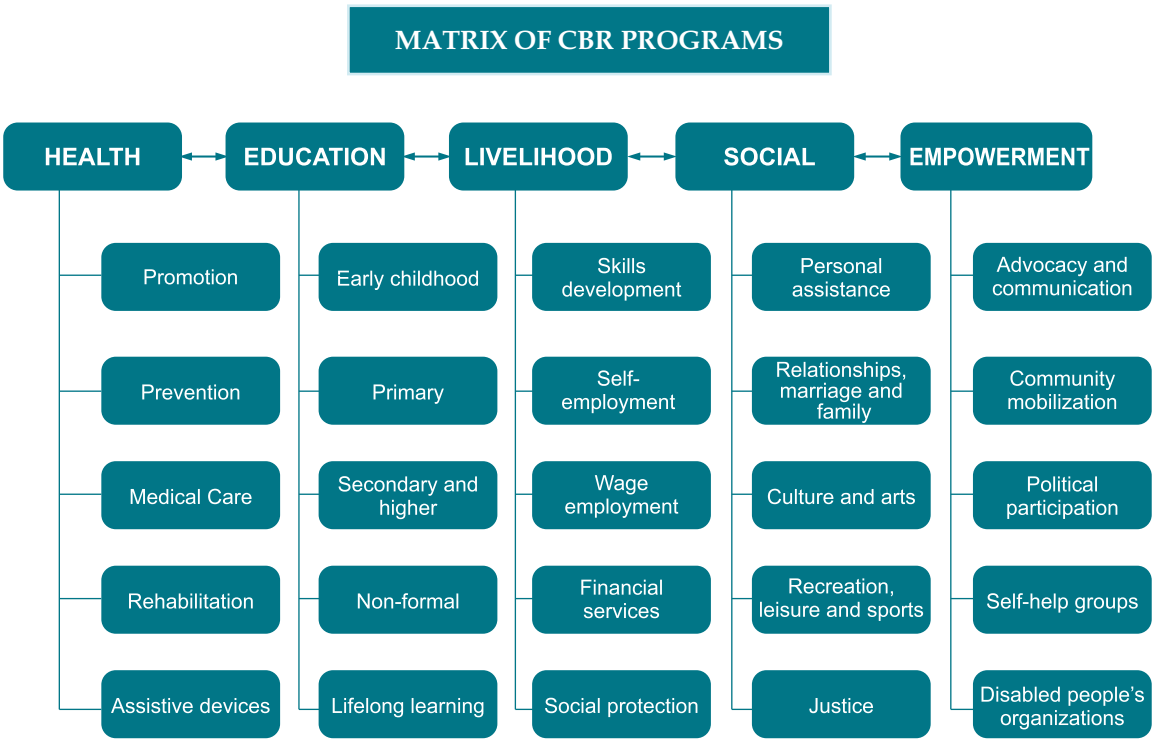
- reducing poverty, given that poverty is a key determinant and outcome of disability
- promoting community involvement and ownership;
- developing and strengthening of multisectoral collaboration;
- involving disabled people's organizations in their programmes;
- scaling up their programmes;
- Promoting evidenced-based practice.

The role of CBR programmes is to promote and protect the rights of people with physical and mental

health problems, support their recovery and facilitate their participation and inclusion in their families and communities. CBR also contributes to the prevention of mental health problems and promotes mental health for all community members (3).

Matrix of CBR The matrix of CBR provides a common framework for development of CBR programs (4). The matrix consists of five key elements

- Health
- Education
- Livelihood
- Social and
- Empowerment components.



Images Courtesy – World Health Organization. UNESCO. International Labour Office. CBR: a strategy for rehabilitation. equalization of opportunities. poverty reduction and social inclusion of people with disabilities. Switzerland: World Health Organization: 2004.

There are 5 elements within each element. The first four elements reflect on the multisectoral focus of CBR and are related to key development sectors. The empowerment of people with disabilities, their families and communities, which is fundamental for ensuring access to each development sector and

improving the quality of life and enjoyment of human rights for persons with disability forms the final component.

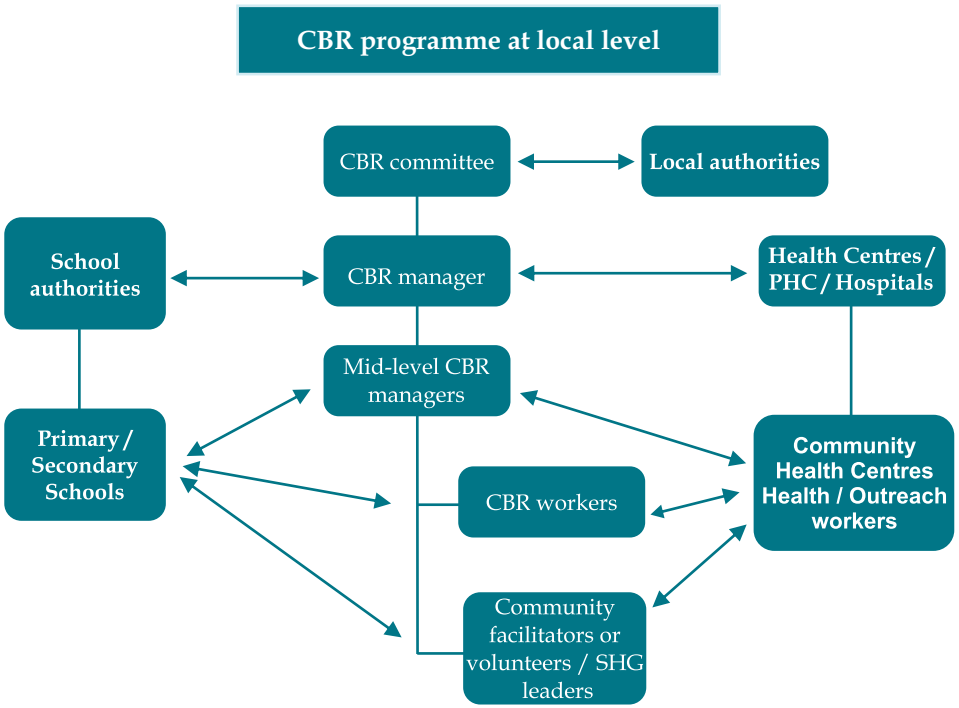
Components of CBR

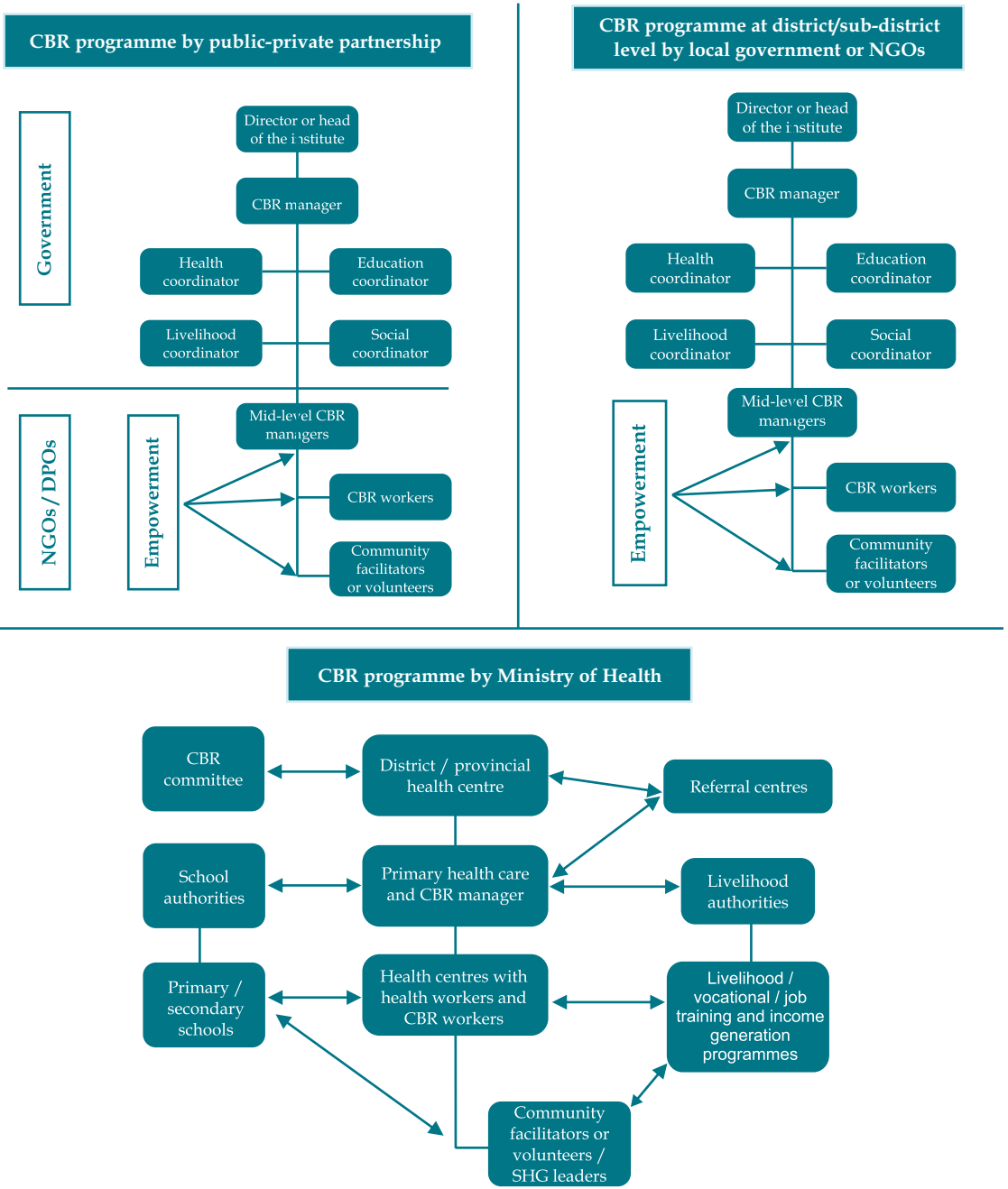
The seven (7) different components of CBR include:

1. Creation of a positive attitude towards people with disabilities
2. Provision of rehabilitation services
3. Provision of education and training opportunities
4. Creation of micro and macro income – generation opportunities
5. Provision of long-term care facilities
6. Prevention of causes of disabilities
7. Monitoring & Evaluation.

The basic principles of human rights including individual dignity, autonomy and self-determination, equality and ethics of solidarity are central to CBR.

Examples of CBR Programs:





Images Courtesy – World Health Organization. UNESCO. International Labour Office. CBR: a strategy for rehabilitation. equalization of opportunities. poverty reduction and social inclusion of people with disabilities. Switzerland: World Health Organization: 2004.

Evidence for the usefulness of CBR Programs

The programs with principles based on CBR is known to be highly effective (5). The evidence based outcomes include but not limited to increased independence, enhanced mobility, and greater communication skills of people with disabilities (6). Strategies based on the principles of CBR are also reported to be cost effective (5).

Systematic reviews of research on community-based approaches in brain injury rehabilitation in high-income countries indicate that such approaches are at least as effective or more effective than traditional approaches, and have greater psychosocial outcomes and a higher degree of acceptance by people with disabilities and their families (7,8). Livelihood interventions associated with CBR have resulted in increased income for people with disabilities and their families and are linked to increased self-esteem (9). CBR has also shown promising results when it comes to positive social outcomes, influencing community attitudes, and to positively enhance social inclusion and adjustment of people with disabilities (5,6,10).

Evolution of CBR Programs in India (for psychiatric disability)

Community psychiatry in India is almost 6 decades old. It started with Dr. Vidya Sagar who, as early as in the 1950s, involved family members of patients admitted into Amritsar Mental Hospital. This experiment not only reaped rich benefits but also initiated a major movement of involving families in the care process. Now dedicated family wards are present in several institutions like NIMHANS, CMC, Vellore and the IMH, Chennai.

A three & half years multi-disciplinary community based approach study done at Sakalawara, rural Bangalore involved the detection and management of priority mental diseases in 120 villages around Sakalwara. During the period 51 patients of schizophrenia, 30 of acute psychosis, 27 of Manic Depressive Psychosis. and 268 of epilepsy were identified in the community with minimum number of drugs (11).

The strategies adopted included immediate prescription of free drugs, further referral to Sakalwara centre for follow up, medicine and messages sent through other patients, medicines being given at dropping points, and home visit if all of the above failed to bring back a patient to the treatment net. The focus was also on early based care only, with follow up over 12 months. A total of 188 persons with schizophrenia was allocated to the CCBC arm while 94 persons were allocated to the FBC arm. 253 (90%) participants completed follow-up to month 12. At 12 months, total PANSS and IDEAS scores were lower in patients in the intervention group than in those in the control group. However, no difference was shown in the proportion of participants who had a reduction of more than 20% in overall symptoms. There was also a significant reduction in symptoms and disability

outcomes at the rural Tamil Nadu (16).

It was concluded that CBR is a feasible model of care in resource poor setting especially in the rural areas. Since a lack of professional resources is the reality in rural settings in India and other developing countries, the authors concluded that the CBR method offers a model which involves active local community participation and low levels of technical expertise to deliver services. The authors also suggested that Mental health professionals can contribute to enlarging the capacity of existing nongovernmental organisations that already operate in such areas to initiate services that draw upon the resources of the community. Emphasising compliance with medication was a core element of the intervention strategy in this study. The collaborative community based care plus facility-based care was found to be modestly more effective than facility-based care, especially for reducing disability and symptoms of psychosis.

In a longitudinal study of people with psychotic disorders who had been ill for an average of 8 years in a rural Indian community, Chatterjee et al (17) used principles of CBR and levels of disability post community intervention. The cohort consisted of 256 people with psychotic disorders including schizophrenia, bipolar affective disorder (BPAD) and other psychosis. All individuals received a community-based intervention package comprising psychotropic medications, psychoeducation, adherence management, psychosocial rehabilitation and support for livelihoods. The primary outcome was change in disability scores. Results at the end of a mean follow up period of 46 months showed that there were significant reductions in the levels of disability for the cohort. The researchers adapted the principles of CBR, and used local resources and involvement of people with mental health problems, families and local communities, to complement the specialist mental health services and thus improve access, equity and acceptability of the interventions. Local members of the community were trained as CBR workers to deliver comprehensive, home-based services, such as identifying people with chronic schizophrenia and ensuring access to the clinical team in outreach clinics, regular follow-up and monitoring, education for people and their families, and planning of rehabilitation interventions.

The Thirthahalli (CoinPsyD) and Turvekere (TURVECARE) program run by NIMHANS (in collaboration with Govt. of Karnataka and partner NGOs) are based on the principles of CBR and have provided care for patients in their own community, garnering local resources (18). These programs entail actively identifying patients with schizophrenia living in these rural communities, treating them and following them up. The village health workers are trained in identifying and referring patients, irrespective of their treatment status, to the treating team. Patients could also be self-referred and referred by key-informants in the community including members of taluk and gram panchayat (block- and village-level local governments), school teachers village accountants,

co-operative society members etc. In these two taluks, most patients with schizophrenia patients are being treated and are being followed-up from 2005 onwards. One non-specialist social worker in each of the taluk is co-ordinating the entire program. He is responsible for scheduling followups, liaising with the local health administration, basic psychosocial interventions, home visits and to be the first contact for patients. Local resources are being tapped for improving patient outcomes, be it the human resources, local employment opportunities and family resources. As a continuation of optimizing resources, the family members act as case-managers to these patients taking care of their needs to the maximum extent possible. The cohort yielded some very important data regarding treatment of schizophrenia in community. The reasons for patients not utilising treatment despite availability in the community, the correlation of disability with care giver burden, and antipsychotic, psychoeducation and follow up as an effective public health strategy to reduce disability are just some of them. Number of articles from these cohort have come that have public health importance, details of which can be found in the chapter (19-29).

The Sangath foundation in Goa has also developed programs rooted on the principles of CBR, to meet the mental health needs of communities in Goa (30). The approach was to train and empower local community resources to provide appropriate healthcare services for developmental disabilities and mental health problems initially. It started with specific areas of focus such as child development, adolescent and youth health, and adult health and chronic disease and is now providing accessible and affordable healthcare services to many communities across the country. Some of the work that Sangath, Goa has done which are rooted on the principles of CBR can be found here (14,31-37).

The National Drug Dependence Treatment Centre (NDDTC) has been implementing community-based treatment programs at three locations in Delhi & the National Capital Region (NCR). These programs run under the aegis of the All India Institute of Medical Sciences (AIIMS), New Delhi. All 3 clinics work through a community-based approach. Each clinic caters to a catchment area and works through trained manpower garnered from the local community. The approach is to provide Opioid Substitution Therapy (OST) to the persons with opioid dependence and at the same time microfinance and support them in occupational rehabilitation with the help of the local community (38). Once the person is functional, the daily medication procurement from the center is changed to a bi weekly/weekly regimen. This aids them by reducing the number of hospital visits.

Persons with mental illness face stigmatisation and discriminated at workplace, relatives and other areas of the community throughout life. And this stigmatisation makes patient under stimulation, disable his opportunities to learn, inhibits his learning process and increases the intensity of the

illness and prolongs recovery (39). 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 (40,41). Therefore, productivity in terms of self-reliance and economic contribution to support one's family are often valued in society. Sustained rehabilitation in the society helps the patient with a positive comes which is associated with reduced psychiatric symptoms, healthcare cost and increased levels of self-esteem, security and satisfaction.

There has been a continuous influx of newer understandings about the CBR models in low resource settings in the last decade. This has brought the public health approaches for the care of persons with mental illness to the forefront.

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Chapter 13

The Future of Community Psychiatry: the role of Tele-Medicine

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HIGHLIGHTS

- Telepsychiatry may help in overcoming the logistic difficulties in service delivery
- Application of technology is indeed relevant for both service delivery as well as capacity building and human resource development
- Telepsychiatry may be an useful tool in reducing the huge treatment gap prevalent in mental disorders and may address the inequality in service delivery
- Innovative programs and approaches in the field of public psychiatry from the Telemedicine centre, NIMHANS team is discussed in this chapter

India is a vast country with majority of the population still living in rural areas, but majority of the health services are in semi urban or urban areas. The transportation services are not developed uniformly throughout the country. It might take a full day for a patient from his village to visit district/state headquarters and obtain mental health services. Added to this burden, patients and their caregivers lose a day's wages due to absence from work during these visits to health center, adding to out-of-pocket expenditure (1). Telepsychiatry can help in overcoming these hurdles and reach the remotest area by use of technology (2). In this chapter, we will discuss the different models of Telepsychiatry relevant to delivery of community mental health services and improving patient care either directly or through collaboration with various health professionals such as primary care doctors (PCDs), etc.

In the face of ongoing COVID -19 Board of Governors in supersession of the Medical Council of India released Tele medicine Practice Guidelines in March 2020 to push Telemedicine practice further and give it an ethical and legal framework. Following this Tele psychiatry Operational Guidelines were framed by Indian Psychiatric Society, Telemedicine Society of India and NIMHANS, Bengaluru empowering the psychiatrists to provide telepsychiatry services (3).

Definition of Tele-Medicine

Telemedicine is defined as "the delivery of health care services, where distance is a critical factor, by

all health-care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of diseases, injuries, research and for continuing education of health care providers, all in the interests of advancing the health of individuals and their communities" (2)

Definition of Community Psychiatry

As per Thornicroft and Szmukler community psychiatry is defined as "a field of psychiatry comprises the principles and practices needed to provide mental health services for a local population by (i) establishing population-based needs for treatment and care; (ii) providing a service system linking a wide range of resources of adequate capacity, operating in accessible locations and (iii) delivering evidence based treatments to people with mental disorders (4)

Telepsychiatry as a medium of healthcare delivery for community psychiatry services

As per National Mental Health Survey-2016, prevalence of mental illness in India is 10.56% (5). In India, there are only 0.29 psychiatrists per one lakh population, as opposed to 11.9 in high-income countries (6). Majority of the psychiatrists in India are concentrated in tertiary care hospitals and medical colleges of major cities and district headquarters. Even psychiatrists in private sector are predominantly restricted to urban areas. Off late, government sector has created a post of psychiatrist at district hospital, but majority of taluka and sub taluka level health care facilities still do not have psychiatrists. Hence, the psychiatric services are predominantly restricted to urban areas, and tele psychiatry will help in reducing this inequality in access to mental health care services, which will be discussed in the subsequent paragraphs.

Classification of Tele-Psychiatry models: Clinician's perspective

Telepsychiatry services can be utilized to redistribute the available mental health professionals through digital communication platforms. Similarly, tertiary health care centers can utilize digital communication platforms to train rural health workers in mental health care for 'task shifting'.

Even though TPG, 2020 (MCI) has categorized telepsychiatry practice it lacks clinician's perspective. So, we attempt to classify telepsychiatry models from clinician's perspective. The telepsychiatry models relevant to community psychiatry can be categorized in to three groups based on their use for training mental health care workers or for providing psychiatric services to people with mental illness.

Training/Task Shifting Models – Tele Mentoring models

a) Hub and Spoke Model
b) Reverse Hub and Spoke Model

c) Modified Hub and Spoke Model

Consultation Models

a) According to mode of communication

1. Video based
    - Mobile Telepsychiatry
    - Collaborative Video Consultation
    - Direct patient Consultation
    - Asynchronous video based model
2. Audio Based
3. Text Based
    - Telemedicine Chat based applications
    - General Messaging / text / chat platforms
    - Asynchronous text based model

b) According to timing of information transmitted

- Synchronous model
- Asynchronous model

c) According to the purpose of the consultation

- First consult
- Follow up consult

Academic Psychiatry

a) Blended model
b) Hybrid model
c) Flipped model

Telepsychiatry models: Discussion with implementation models

In the following paragraphs authors discuss various models of telepsychiatry that are implemented at two wings (Tele-Medicine Centre and Virtual Knowledge Network) of NIMHANS Digital Academy, National Institute of Mental Health and Neuro Sciences, Bengaluru. It is important to note that most of the training programs that have been discussed in the following paragraphs are the mixture of different models that are mentioned above.

Training/Task Shifting Models – Tele Mentoring Models

Hub and Spoke Model

This system arranges training provider and training utilizers into a network. 'Hub' is the central organization where training providers are located. 'Spoke' consists of individual healthcare settings or mental health professionals who receive training. 'Hub' and 'spoke' are connected through audio and video communication using communication technology platforms.

Following projects are being implemented by using Hub and Spoke model:

Chhattisgarh Community Mental Healthcare Tele-Mentoring Program (CHaMP)

This is a training program where PCDs are trained in identifying and treating common mental disorders. Training is conducted in the form of weekly didactic sessions lasting 2 hours each, for 8 weeks. In this model 'hub' consists of a psychiatrist form the National Institute of Mental Health and Neuro Sciences (NIMHANS) and 'spoke' consists of PCDs from selected districts of Chhattisgarh. Six academic classes covering anxiety disorders, depressive disorders, somatoform disorders, substance use disorders, psychotic disorders and their pharmacological management are conducted by the psychiatrist from 'hub', and around 10 to 40 PCDs join from spoke side. As part of the training, primary care doctors are supposed to complete assessments after each class. Similar model of tele mentoring has been utilized in Primary Care Psychiatry Programs of Uttarakhand, and Bihar (7,8).

NIMHANS- Extension for Community Healthcare Outcomes (ECHO) Tobacco Cessation Certificate Training for Counselors of District Hospital

Project ECHO is a model of telementoring and collaborative learning which was initially developed to assist PCPs in treating hepatitis C in remote areas of US. Over the period of time this model has been extended to different specialties of medicine for the larger benefit of patients (9). The ECHO model was used for training district hospital counselors in tobacco cessation. In this program, the district tobacco cessation clinic counselors receive training in identifying tobacco dependance and provide counselling for tobacco cessation. This model involves both asynchronous and synchronous components in it.

In the asynchronous mode, counsellors (spoke) go through e-learning assignments presented via the phone-based application, which would be evaluated, and a feedback will be given at a later point. Synchronous mode involves didactic lectures, case presentations (by counselors) and discussion with NIMHANS Tobacco Cessation Centre experts (hub) over 6 months, through digital technology platforms. After successful completion of course work, participants receive a certificate (10).

Reverse Hub and Spoke Model [Collaborative Video Consultation (CVC) and Telepsychiatric On Consultation training (Tele - OCT)]

Reverse Hub and spoke model is a decentralized model with no central monitoring facility. Here computers equipped with video conferencing facility is present at spoke side and the spoke side PCD initiates the contact with specialist doctor present the hub side (11). There are two models which are based on reverse hub and spoke model. In the CVC model, on the 'spoke' side, PCDs examines the patient in his hospital, supervised by psychiatrist from the 'hub' through digital communication platforms. Psychiatrist from the 'hub' intervenes during the examination to clarify history, helps primary care doctor to arrive at psychiatric diagnosis and devise a management plan for the patient. This handholding is undertaken after the didactic lecture on the relevant topic is done. CVC has been used to train PCDs under Primary Care Psychiatry Programs of Uttarakhand, Bihar and Chhattisgarh (7,8).

Tele – OCT is a model where the mentoring of the PCD (spoke) is done while he/she would be consulting live in their routine general outpatient consultations. For tele mentoring, Clinical Schedules of Primary care Psychiatry manual is utilized. In this model the patients are selected randomly from the patients attending the OPD at spoke side (whereas in CVC model the patients who are suspected to have mental illness are selected), and "hub" side psychiatrists trains the PCD in screening and treating common mental disorders (7).

Modified Hub and Spoke Model

This is four tier-based model, which was used in Karnataka Telemedicine Mentoring and Monitoring (KTM) Program where, in addition to tele mentoring the PCDs, training of trainer model is also incorporated. While the tele mentoring for the PCDs is done, DMHP psychiatrists are also trained in training (TOT) the PCDs in identifying and managing psychiatric illnesses. The above trained Psychiatrists further handhold the PCDs at the Primary Health Centre (PHC) and provided training in identifying and managing psychiatric illnesses. This model has a 'hub', 'mini-hub' 'micro-hub' and 'spokes' (Fig 1). 'Hub' was represented by a KTM project psychiatrist who was stationed at NIMHANS, 'Mini-hub' was the psychiatrist in DMHP, who was at the district headquarters, micro-hub was at the PHCs where the PCDs are working, and 'spokes' were the patients who get the final benefit (12).

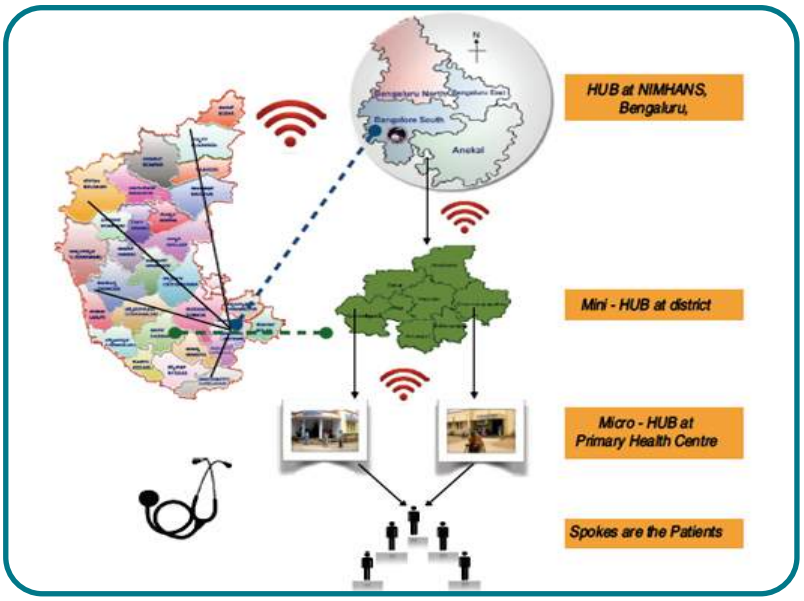

Figure 1: Karnataka Tele Mentoring Program Model

The training was imparted while the PCD would be seeing his/her routine OPD. First session would be a didactic session discussing "Clinical Schedules for Primary Care Psychiatry (CSP)". In the second session, psychiatrist from the 'hub' would take the lead in screening for psychiatric illness by handholding the PCD (when PCD sees patients), intervening to clarify history and guiding the PCD to diagnose psychiatric illness and manage the illness. Psychiatrist at the 'mini-hub' would observe the process and learn to train the PCD. In subsequent sessions, psychiatrist at the 'mini-hub' would handhold the PCD and impart training in diagnosing and managing psychiatric illnesses and psychiatrist at the 'hub' would intervene if necessary, to assist the psychiatrist at the 'mini-hub' in handholding the PCD. Thereafter, the psychiatrist at the 'mini-hub' would impart training to PCDs independently, with supervision from the psychiatrist at the 'hub' (12).

Patient Consultation Models

The consultation models can be divided in multiple ways as at the beginning of this chapter. We would like to discuss these models under the headings of synchronous and asynchronous models, as that makes the discussion relatively simple and easier to understand.

Asynchronous Model

In asynchronous model, the clinical details of the patient from the 'spoke' side is recorded in the form of audio/video/text and transmitted electronically to the 'hub' side. Psychiatrist at the 'hub' side will

review the information received, diagnose and suggest a management plan which is transmitted back to the 'spoke' side at a different point of time. Since the exchange of information between spoke and hub side occur at different points of time, it is called as asynchronous model. This model cannot be used when the management plan is required urgently or within short span of time.

This model was utilized in Maharashtra under the Maharashtra State Telemedicine Project. Psychiatrists from six tertiary care hospitals in Mumbai, Pune and Aurangabad constituted the 'hub'. Primary care physicians from twenty-seven district and four sub-district hospitals constituted the 'spoke'. Patients were examined by the physicians at district/sub-district hospitals and the findings were sent to the 'hub' through the email. Psychiatrists at the 'hub' reviewed the patients' data, and opined on psychiatry diagnosis and suggested management plan, which was emailed back to the 'spoke' side. Transmission of data was asynchronous (13).

Synchronous Model

This is similar to asynchronous model, except that the interaction between spoke and hub occurs live, in the same time frame, either via audio, video or text. Some of the models are presented below.

Mobile Telepsychiatry

Schizophrenia Research Foundation (SCARF) provides telepsychiatry services to rural parts of Tamil Nadu using mobile platform. Psychiatrist in their Chennai center (SCARF) forms the 'hub'. A custom-built bus with a consultation room, pharmacy, audio video equipment and wireless internet connection forms the 'spoke'. This bus, along with a telepsychiatry clinic facilitator, visits villages and patients consult the psychiatrist in Chennai through the digital platform present inside the bus. Free medications are also dispensed through the onboard pharmacy, based on the prescription sent to telepsychiatry clinic facilitator in the bus (14).

Collaborative Video Consultation (CVC)

In CVC, psychiatrist at the 'hub' examines the patient on the 'spoke' side in collaboration with the PCD present at the 'spoke' side. The management plan is devised by the psychiatrist at the "hub" and it is executed by the PCD at "spoke". CVC is also discussed under the heading of "tele mentoring model", it is so because, CVC model not just involves mentoring of the PCDs but also involves direct patient care. Readers are advised not to get confused. Some programs that had used CVC model in India are elaborated below.

NIMHANS, and District/Taluk Hospitals in Karnataka

NIMHANS (hub) has provided tele psychiatry consultations to the patients through PCD from the district/ taluk hospitals (spoke) of Karnataka over Karnataka State Wide Network (digital

platform). PCD's would fix an appointment with the psychiatrist at NIMHANS (hub) for a particular time slot, when the patient would be examined in collaboration with PCD over Karnataka State Wide Network. Psychiatrist discusses the diagnosis and management plan with the PCD and prescription is dispensed through the PCD (spoke) (15). Similar tele psychiatry consultations were also given to inpatients of a urban health care center by another group of researchers (16).

NIMHANS and Central Prisons in Karnataka

Similar to above model NIMHANS (hub) was also involved in providing psychiatric consultations to Central Prison inmates through prison medical officers (spoke) over Karnataka State Wide Network (digital platform). This was done between 1st July 2014 to 30th June 2015. Total of 53 patients were provided telepsychiatry consultations, among which almost 80% patients were managed over the vido consultation and only 20% needed further evaluation at a higher center, suggesting that tele psychiatry consultations are very much feasible and helps to reduce the unnecessary logistic issues in settings such as prison (17).

Jan Swasthya Sahyog (JSS) Telepsychiatry Initiative

JSS is an NGO working in the area of healthcare in Bilaspur, Chhattisgarh. A volunteer psychiatrist from Germany (hub) in collaboration with JSS provided tele psychiatric consultations to patients visiting JSS outpatient clinic in Ganiyari village, Chhattisgarh (spoke) between 2012 - 2015. Patients were seen over skype in presence of the PCD. Diagnosis and treatment plan were made after discussion with the PCD, and medicines were dispensed from the JSS outpatient clinic. This model again emphasized how tele psychiatry can help us in reach the underserved remote areas (18).

Direct Patient Consultation

Direct patient consultation too can be provided by using tele psychiatry. Here, the psychiatrist from the tertiary care hospital (hub) provides consultation to the patient (spoke) directly via digital technology platform. Following successful consultation, a scanned copy of prescription is sent through any of the digital technology platforms. Two of the existing programs of direct patient consultation are discussed below.

Telepsychiatric After Care (TAC) Clinic

Tele-Medicine Centre, NIMHANS, Bengaluru has been offering TAC services to those patients who have their treatment records at NIMHANS from 2016. Patients are enrolled for this service from both outpatient and inpatient department. Patients are selected by the treating team depending upon the convenience of the treating psychiatrist, following which the due procedure of obtaining the consent and fixing an appointment would be done. On the appointment day, staff from Telemedicine Centre

will contact the patient and arrange for live video consultation with the treating psychiatrist. Following successful consultation, scanned copy of prescription will be sent through email or WhatsApp and next appointment date is provided at the end of consultation. TAC services have helped the patients to obtain consultations with psychiatrist during the tough times of COVID-19 (19,20).

e-Sanjeevini OPD: National Tele-Consultation Service

This is a government of India initiative, currently covering selected Indian states. It is an online platform linking district hospitals with medical colleges (hubs) for telemedicine consultation. Patients can register (spoke) on the e-Sanjeevini platform with their phone number. After which an ID number is generated, and then patients can log in to the e-Sanjeevini portal and choose Specialized or General OPD services, and avail teleconsultation from doctors. Psychiatry consultations are provided under Specialized OPD. After the consultation, patients receive e-prescription (21).

Academic Psychiatry

Purely academic sessions to students and practitioners can also be imparted by utilizing digital platforms, which can be in the form of lectures, academic discussions, conferences, webinars etc. They need same technological infrastructure as telemedicine. Hence, we can use existing telepsychiatry infrastructure in tertiary care hospitals to deliver academic sessions. They can also be used for sensitizing other health professionals about mental health issues. There are different types of course models that are developed like blended course, hybrid course and flipped course.

Blended model

Blended course is the one which involves face to face traditional didactic sessions accompanied by availability of online learning material and self-assessment tasks. The online materials available here are not intended to replace the face to face didactic sessions.

Hybrid model

Hybrid model involves online synchronous didactic sessions, which are intended to replace the part of traditional face to face didactic session and asynchronous availability of learning materials or discussion threads and assessment tasks.

Flipped model

These courses are characterized by the flip in timing of didactic session (either real time or online synchronous) and availability of online learning material. In traditional learning methods, online classes are held first followed by availability of learning material online, but here the learning

materials are provided before the didactic sessions. The students go through the learning material first and then attend the didactic sessions.

The distinction between the above three models is very blurred. At NIMHANS we use combination of the blended and hybrid models in various programs like INDIANS, CHaMP project and VKN courses.

Conclusions

The number of mental health professionals available in India is way below that of the required numbers, and majority of the available professionals are concentrated in the urban areas. Telepsychiatry can help us in effectively redistributing the services of available mental health professionals. Most of the studies that have been quoted throughout this chapter have concluded that the tele psychiatry services are feasible, effective and are accepted well. With ongoing COVID – 19 pandemic tele psychiatry assumes even more importance to reach the underserved communities. So, we conclude by saying that tele psychiatry can be an effective tool implementing the community psychiatry programs.

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