



National Mental Health Survey of India, 2015-16

State Report CHHATTISGARH

Conducted in Chhattisgarh by



**Department of Psychiatry
&
Department of Community & Family Medicine
All India Institute of Medical Sciences (AIIMS), Raipur**

Co-ordinated by



**National Institute of Mental Health and Neuro Sciences (NIMHANS)
Bengaluru**

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MESSAGE

It is heartening to know that Mental Health - Research and Action oriented study for Chhattisgarh state has done by AIIMS, Raipur, Chhattisgarh. I appreciate efforts of The Ministry of Health and Family Welfare, Government of India commissioned NIMHANS, Bengaluru to undertook nationally representative mental health study to understand the burden and patterns of mental health problems, examine treatment gap, health care utilization patterns, disability and impact amongst those affected.

I wish this report can be used as benchmark for making future policies to strengthen mental health related services in Chhattisgarh.


(Dr. Raman Singh)



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MESSAGE

It is a matter of great pleasure to learn about the state report of National Mental Health Survey, conducted by All India Institute of Medical Sciences, Raipur for the state of Chhattisgarh.

This survey was conducted in three districts of Chhattisgarh and an effort was made to reach out to different strata of population.

This survey report encompasses not only the burden of mental illness but also gives us an idea about current mental health facilities available in the community. It also denotes area specific distribution of various mental health illnesses and the problems encountered in their treatment. It highlights various other socio-economic factors producing hindrances in the management of psychiatric illness.

This report would help to lay the foundation of modern mental health facilities and in improving the current medical facilities.

I extend my good wishes and appreciation for the whole team.

Their hard work and efforts are commendable.


Prof. (Dr.) Nitin M Nagarkar

2.10.2016

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ABBREVIATIONS

ADHD	Attention deficit hyperactivity disorder
ASD	Autism Spectrum Disorders
ASHAs	Accredited Social Health Activist
BPAD	Bipolar Affective Disorder
CAPA	Child Adolescent Psychiatry Assessment
CBCL	Child Behaviour Check List
CBS	Culture Bound Syndromes
CDB	Community Development Blocks
CEB	Census Enumeration Block
CIDI	Composite International Diagnostic Interview
Co-I	Co- Investigator
Co-PI	Co-Principal Investigator
DAWBA	Developmental And Well Being Assessment
DIS	Diagnostic Interview Schedule
DISC	Diagnostic Interview Schedule for Children
DMHP	District Mental Health Programme
DSM IV	Diagnostic and Statistical Manual of Mental Disorders Version IV
DSM-V	Diagnostic and Statistical Manual of Mental Disorders Version V
FDC	Field Data Collectors
FGDs	Focus group discussions
FSU	Final Sampling Unit
GHQ	General Health Questionnaire
GJ	Gujarat
GTCS	Generalized Tonic-Clonic Seizures
HH	Household
HHED	Hand Held Electronic Devices
HMI	Homeless Mentally Ill
ICD 10	International Classification of Diseases Version 10 Diagnostic Criteria for Research
ICMR	Indian Council for Medical Research
ID	Intellectual Disability
IEC	Information education communication
IEC	Institutional Ethics Committee
IT	Information Technology
KIIs	Key Informant Interviews
LAMIC	Low and Middle Income Countries
M.I.N.I.	Mini International Neuropsychiatric Inventory
MDD	Major Depressive Disorders
MHAP	Mental Health Action Plan
MHB	Mental Health Bill
MHSA	Mental Health Systems Assessment
MNS	Mental, Neurological & Substance use disorders
MOA	Memorandum of Understanding
MoHFW	Ministry of Health and Family Welfare
MOS	Medical Outcome Systems Inc
MPW	Multi-purpose workers
NAC	NMHS Advisory Committee
NEP	National Expert Panel
NIMHANS	National Institute of Mental Health and Neuro Sciences

NMHP	National Mental Health Programme
NMHS	National mental Health Survey
NMP	NMHS Master Protocol
NSAB	NMHS State Advisory Board
NSDCT	NMHS State Data Collection Team
NST	NMHS State Team
NTAG	National Technical Advisory Group
OG	Operational Guidelines
PAPI	Paper and Pencil instruments
PHCR	Poverty Head Count Ratio
PI	Principal Investigator
PSE	Present State Examination
PSU	Primary Sampling Unit
QSC	Qualitative study Component
SCL-90-R	Symptom Check List -90 Revised
SDI	Socio - Demographic Information
SDQ	Strengths and Difficulties Questionnaire
SDS	Sheehan Disability Scale
SI	Sampling Interval
SMHSA	State Mental health Systems Assessment
SSDA	Single Stage Diagnostic Assessment
SSU	Secondary Sampling Unit
SUDs	Substance use Disorders
TAPI	Tablet Assisted Personal Interviews
TN	Tamil Nadu
UP	Uttar Pradesh,
WB	West Bengal
WHO mhGAP	WHO Mental Health Gap Action Programme
WHO	World Health Organization
WHODAS 2.0	World Health Organization Disability Assessment Schedule 2.0
WMH	World Mental Health Survey

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EXECUTIVE SUMMARY

Mental health is always a reflection of the inter-related phenomena around the physical, social and emotional wellbeing of a person. With the fast changing dynamics of human behavior, lifestyle, food habits, environmental influences and consequent understanding of mental morbidity, we, along with the health system of our country need to prepare ourselves to match the demand and supply related to mental healthcare needs. The success of public health programmes is best achieved when the need and current status are adequately understood. In the recent past there had been no nationally representative statistics to inform programmes on mental health. The available data in the literature are not representative of national population but focal in nature.

The national mental health survey was undertaken across 12 states of India using uniform and standardized methodology during 2015–16. National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru was the main coordinating center supported by the Ministry of Health and Family Welfare, Government of India. The results from the survey, is expected to have a huge impact on policies and programmes for mental health as this is first ever nationally representative survey on Mental Health in India. One arm of this survey aimed to estimate prevalence rates of mental health problems and treatment gap, health seeking pattern, disability, and socioeconomic impact of those affected. The other arm assessed the existing state of mental health systems.

All India Institute of Medical Sciences (AIIMS), Raipur was the partner institute for the state of Chhattisgarh. The survey was undertaken by the team of investigators from the department of Psychiatry and department of Community and Family Medicine of AIIMS, Raipur. Seven field data collectors were trained over a period of 2 months to undertake the survey. The Survey was conducted in three districts which were selected by stratified random sampling procedure. Rural and urban areas were adequately represented in the sampling frame, by using probability proportionate to size methods. The field work was undertaken during 28 December 2015 to 8 May 2016.

Participants were interviewed using structured diagnostic questionnaires to assess mental morbidity (MINI 6.0.0) including substance use disorder, disability, treatment seeking behavior and socio-economic impact of mental illness. Mental morbidity was assessed as ‘current’ and ‘lifetime’ illnesses.

In all, 2841 adults (age >18 years) from 722 households were interviewed giving a response rate 92.3%. Current prevalence of any mental morbidity in the state was 11.66% and lifetime

prevalence was 14.06%. Tobacco use disorders and alcohol use disorder were prevalent in 29.86% and 7.14% of the subjects respectively. Suicide risk assessment in the surveyed population revealed that 0.28% of the population was at high risk for suicide. The suicide incidence rate (per 1,00,000 population) in the state was 22.4 as per the National Crime Records Bureau-2014 estimates.

The major mental health problems that have been identified in NMHS 2015-16 for the state of Chhattisgarh are tobacco use disorders (29.86%), alcohol use disorders (7.14%), depressive disorders (1.59%) and neurotic and stress related disorders (2.38%). Severe mental disorder (Psychosis, Bipolar disorder, Depression with psychotic symptoms) was observed in <1% of the population, whereas prevalence of common mental disorder was at 11.20%. Prevalence of common mental disorder was high among male (17.85% in males Vs 5.03% in females) and was primarily due to inclusion of alcohol use. Further, males also reported a higher prevalence of severe mental disorder (0.81% in males Vs 0.72% in females). Burden of mental disorder was relatively higher among urban residents. In common mental disorders, 13.08% in urban metro areas compared to 10.58% in rural areas. However, in severe mental disorders, burden was relatively higher among rural residents (0.79% in rural areas, compared to 0.77% in urban metro areas) and in those belonging to fourth income quintile (14.68%, compared to 8.63% in the lowest quintile).

On an average, a mentally ill person was disabled by the illness for half the days in a month and families spent almost INR 1000 per month towards care of the affected person. Around four-fifths (78.35%) people with mental morbidity were not on treatment. The projected estimates for Chhattisgarh for 2016 gives an impression of overall estimated burden in numerals. More than 20 lakhs adults have any mental morbidity as per MINI and an alarming more than 23 lakhs are tobacco dependent.

The mental health systems assessment revealed grossly inadequate service availability for mental health. Only one-third (33.33%) of the districts in the state are covered under the District Mental Health Programme. The state didn't have a State Mental Health Policy and availability of mental health action plan was also not uniform through all districts. No separate budget was allocated for mental health in the state. Availability of trained manpower, drugs and IEC material were inadequate. Inter-sectoral collaboration was almost non-existent.

This report of the National Mental Health Survey for the state of Chhattisgarh provides realistic burden of mental health problems in the state, as it used a standard and uniform

methodology and highlighted the need for up-grading and integrating the service delivery at different levels in the healthcare delivery system. The key recommendations for the state of Chhattisgarh are as follows:

Policy related

1. A state specific mental health policy in the light of National mental Health Policy should be developed to formulate the road map of activities for the state of Chhattisgarh.
2. Sensitization of the policy makers and state administrators on the current status and future requirement for mental health services so that Mental Health can be placed as a priority in the public health agenda of state
3. Development of proper regulatory framework and roadmap of activities for the NGOs as a part of the state mental health policy.
4. Establishment of full-fledged Program management unit in Directorate Health Services, of which Mental Health will be a part

Activity related

5. Capacity building of the Doctors working in primary health care institutions and NGOs working in the area of mental health in the state of Chhattisgarh. AIIMS Raipur may be recognized as the Nodal centre for this activity.
6. Formulation of agenda with timeline for integrating mental health care activities with primary health care with inbuilt monitoring system.
7. Up-gradation of mental healthcare facilities in the state including opening of postgraduate teaching in medical colleges in psychiatry.
8. IEC materials in local languages have to be developed and frequency of awareness campaigns needs to be increased in the communities to reduce stigma and improve awareness in mental health.
9. Activities with intra and inter-sectoral collaboration related to mental health to be undertaken bimonthly/quarterly basis so that quality of activity would improve and unnecessary duplication of work can be avoided. For example, convergence in planning and implementation for Rehabilitation of Mentally ill between Department Social Welfare and Ministry of Labour at State level.

Monitoring /Evaluation related

10. A separate public health cadre in the state can be entrusted with the responsibilities like proper implementation, monitoring, supervision and evaluation of health programs and policies (Mental health will be one among those).
11. For proper implementation of mental health legislations and particularly those related to alcohol, tobacco and other substance use in Chhattisgarh, activities like monitoring the sell, use and advertisement of these substances may be done with interdepartmental collaboration.

INTRODUCTION

Mental health is an important and integral part of the overall health of a person. Mental illnesses which are as common as other health problems, affect the thought process, behavior, interpersonal relations, feelings and the way of day to day living in the society. These illnesses and particularly those lasting for a longer duration or recurring in nature can bring many a challenges in one's life; may be in the form of economic breakdown, disruption in familial or social life, losing the name-fame and identity leading ultimately to a social or psychological isolation. Majority of individuals will experience some mental health issues at some time: some for short periods of time and a few for longer periods; people develop symptoms and behaviors that are distressing to them or others, and interfere with their social functioning and capacity to negotiate daily life. These symptoms and behaviors, that occur in isolation or together as clusters may require treatment or rehabilitation, including hospitalization.

Unlike other physical health problems, mental illnesses comprise of groups of conditions (more than one with varying degrees of severity). The range of disorders can be from short term spells of anxiety and stress, through more extreme forms like psychoses. The likely course and outcome is dependent upon multi-factorial influences related to the disorder itself, the individual as a whole, and the social environment. Some disorders are transient, some are acute, while others are chronic in nature. Some are episodic while few are recurrent and / or continuous. Severe forms of illnesses are obviously recognizable, while milder forms usually go unnoticed unless consciously searched for. Further, many mental health conditions are co morbid parts of other health disorders as well. The functioning levels of individuals will vary, being poor during periods of major depression or mania and may involve substantial disability and needs support for several years. The degree of ability or disability also varies over time and across different life domains and is based on the condition. Functioning may be affected by the stress of having to hide a condition in work or school etc., by adverse effects of medications or other substances, or by mismatches between illness-related variations and demands for regularity.

Even though substantial numbers are affected with one or more mental health problems during their life time, there is a strong social stigma attached to mental ill health, and people with mental health problems can experience discrimination in all aspects of their lives. The problems are made worse by the stigma and discrimination experience not only from society, but also from families, friends and employers. People with mental health problems are amongst the least likely of any group with a long-term health condition or disability to find work, be in a steady long-term relationship, live in decent housing, and be socially included in

mainstream society. Stigma and discrimination worsen mental health problems and delays or impedes help-seeking, treatment, and recovery. Social isolation, poor housing, unemployment and poverty are all linked to mental ill health. Hence, stigma and discrimination traps people in the vicious cycle of illness.

Empirical evidences on mental health

During the last five decades, several researchers both from India and abroad have examined a number of mental health issues. Research has been undertaken in both clinical and population based settings, often with different priorities that seem complementary to each other. From a public health perspective, the prevalence, pattern, characteristics and determinants of various mental disorders have been examined. In addition, care related issues like service delivery aspects and system issues have also been studied. However, scientific extrapolations and estimates at the state levels have not been possible due to methodological limitations. Moving beyond prevalence, data has been extremely limited on health care utilisation, disability, impact, stigma and the overall impact of mental disorders on individuals and families.

Recent studies and anecdotal reports indicate the emergence of new problems like common mental disorders, alcohol and drug abuse, depression, suicidal behaviours and others. Understanding these emerging public health problems has been limited due to lack of research.

Furthermore, the preparedness, responsiveness and capacity of health systems to address these challenges have not been well understood till date, even though previous reviews and evaluations have addressed the independent components. Thus, these issues combined, have not only slowed the growth of mental health services, but also limited its expansion both quantitatively and qualitatively.

Health Systems and Mental Health

To achieve the goal of high standards in the quality of care and improved outcomes based on the principles of universal care and equity, it is essential that health systems are strengthened and made responsive to changing health priorities and concerns. On the contrary, lack of a comprehensive and integrated systems approach to mental health care, results in poorly functioning or absent mental health care services.

Need for the National perspective

To plan, develop, implement, monitor, evaluate and strengthen mental health services in India, there is a need to understand the clear burden of mental disorders as well as the existing resources and services across the country. As the data from previous studies had its

limitations which often precluded its use for planning mental health services in India, the need for good quality information has been reiterated.

Thus, in order to strengthen mental health policies and programs at the national and state levels, the Ministry of Health and Family Welfare (MOHFW) identified undertaking the National Mental Health Survey (NMHS) as a priority area during the 12th plan period based on the recommendations of the Joint Parliamentary Committee, parliamentarian's frequent questions, judicial directives, policymaker's concerns, professional's need, media concerns, and several others.

OBJECTIVES

The aim of NMHS 2015-16 was to generate national and state level estimates of any mental health morbidity and provide information to plan and develop mental health services in the country. The specific objectives for the NMHS are

- (1) Estimating the prevalence and burden of MNS disorders in a representative population of India.
- (2) Identifying the treatment gap, health care seeking and service utilisation patterns and disability and socio-economic impact of the illness.
- (3) Assessing mental health care resources and facilities in the surveyed states for future resource strengthening.

METHODS

The National Mental Health Survey was conducted in the 12 states during phase 1.

The country was divided into 6 regions: North, South, East, West, Central and North east.

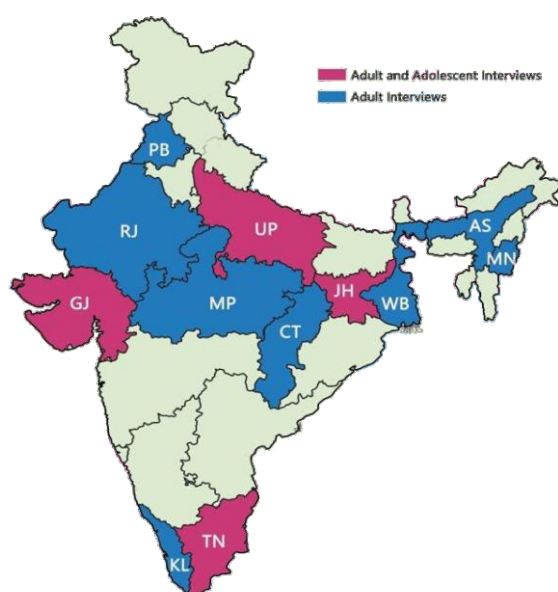


Figure-1 Selected Indian States for NMHS

- ❖ North–Punjab and Uttar Pradesh;
- ❖ South –Tamilnadu and Kerala;
- ❖ East– Jharkhand and West Bengal;
- ❖ West– Rajasthan and Gujarat;
- ❖ Central –Madhya Pradesh and Chhattisgarh
- ❖ North-east – Assam and Manipur.

Sample Size

As per the pilot study in the Kolar district of Karnataka, prevalence of any mental morbidity among adults was 7.5%. Based on this prevalence, with an absolute precision of 2% at 95% confidence level with estimated design effect of 3 and a non-response rate of 30%, the total sample size computed was 3000 adults ≥ 18 years of age. This was achieved by interviewing 50 adults ≥ 18 years in each cluster and 60 clusters were selected for the survey from the entire state.

Study Design

The overall study design adopted was a **stratified, random cluster sampling technique, with random selection based on Probability Proportion to Size at each stage.**

Selection of Districts, Talukas / CDB and Clusters

Considering the experience of the Pilot study, recommendations of the N-TAG and discussions with the expert group and to provide better representation, a 4 stage sampling was adopted. (District, CDB / Taluka, Village / Ward CEB, HH) in each state.

- 1) Selection of Districts: As there is increasing evidence that socioeconomic status and poverty issues are closely related to mental illnesses, district level poverty estimates was adopted to stratify the districts within the selected states. The district wise poverty estimates were computed based on data from National Sample Survey 68th round (2011-12) consumer expenditure data using Tendulkar's committee methodology of calculating poverty line. All the districts within the individual state were rank ordered and trifurcated. One district was randomly selected within each strata using the PPS strategy.
- 2) Selection of Talukas / CDB: A total of two CDBs / Talukas were selected randomly within each identified district using the PPS strategy.

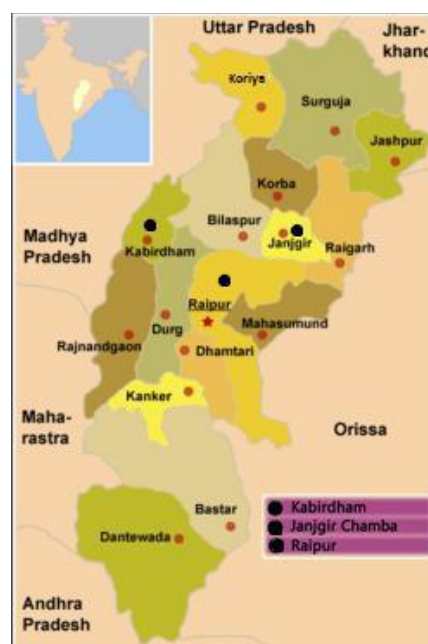


Figure-2: State Map of Chhattisgarh with survey districts

- 3) Selection of Clusters: The total number of Urban and Rural clusters within the selected CDB/ talukas was proportional to the state urban-rural proportions and were drawn using the PPS strategy. Each urban cluster was further stratified as urban metro areas and urban non-metro areas as per 2011 census

Each named inhabited village as per Census 2011 constituted a rural cluster. The list of wards from Census 2011 formed the urban and metro clusters.

Table-1 Selected Districts, Talukas / CDBs and Rural and Urban (Metro and Non-Metro)

District	Block	Rural	Urban Metro	Urban Non Metro
Janjgir-Champa	Jaijaipur	Bodsara, Khairjhati Hardi, Jhalrundra Katetar, Karhi, Beladula, Kikrda		Jaijpur (NP) Ward No- 0002
Janjgir-Champa	Pamgarh	Sirri, Pandri , Khapri, Kosir, Bhulgaon, Dhardehi, Bhainso, Kosa		Kharod (NP) Ward No.-0014
Kabirdham	SahaspurLohara	Pawle, Gorakhpur Kotgaon, Nawagaon, Sari, Samariya, Singhanpuri, Ranveerpur		Sahaspur- Lohara (NP) Word No-0003
Kabirdham	Pandariya	NawagaonKhagesh Charbhatakalan, MouhaMadwa, SukliGovind, BodtaraKhurd, Andhiyarkhor, Dhobghatti, Mohgaon		Pandatarai (NP) Ward No- 0015
Raipur	Raipur	SiliyariKurud, Mauhagaon, Tiwarariya, Deori-2 Guma-2, Dunda, Sankara, Gordi	Raipur Ward No.- 0007, Raipur Ward No.-0009, Raipur Ward No.- 0012, Raipur Ward No.- 0015, Raipur Ward No- 0029, Raipur Ward No.-0046	Birgaon Ward No-0007, Boriakhurd (OG) Ward No- 0072
Raipur	Deobhog	Sargibhali, Darlipara Suklibhata, Supebeda Mokhaguda, Mungjhar Chichiya, Girsul		

Selection of Households

The steps in selecting HH for interviews were:

- 1) Prior to the start of the survey, a house-listing exercise was undertaken in each cluster to implement the systematic sampling strategy.
- 2) The Sampling Interval (SI) was arrived at by dividing the number of HH in each cluster with the number of households needed.
- 3) The first HH was identified using the method adopted in Immunisation Coverage

Evaluation Surveys.

- 4) The second HH was first HH + SI on the right hand side of the first HH. The third HH was second HH + SI on the right hand side of the second HH, thus following in an anti-clockwise manner till the requisite number of HH were selected.
- 5) Number of HH needed: In the state of Chhattisgarh the survey was conducted only amongst adults. The average number of eligible members (>18 year old) within each HH was 3.5 from the pilot study. Hence the number of HH that needed to be selected in each cluster was 15 ($50/3.5=14.3 \approx 15$).

Selection of individuals

The steps in selection of individuals within the households were:

- 1) All resident members of the household were enlisted enquiring from a responsible respondent
- 2) All eligible members above the cutoff age (above 18) in the HH were identified.
- 3) Consents for interview were obtained.
- 4) In case an individual member is not available, two more visits were planned: first visit on a holiday and the second one with a prior appointment.
- 5) If after the third visit, the individual was not available, then he/she was declared as a non- responder.

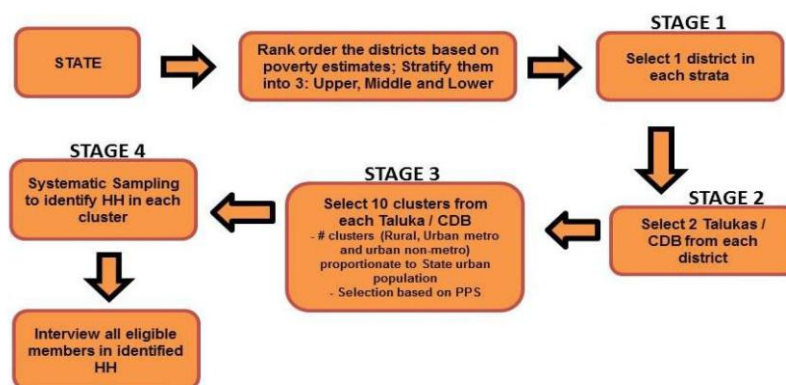


Figure-3 Overview of the study design

Study Instruments

To achieve the study objectives, the following instruments had been identified for the national survey.

- a) Socio-demographic form.
- b) Mini International Neuro-psychiatric Inventory (MINI) 6.0 for adult.
- c) Intellectual Disability screening.

- d) Epilepsy related questions to obtain probable diagnosis of Generalised Tonic Clonic Seizures.
- e) Tobacco use questions.
- f) Health treatment and care.
- g) Socio-economic impact (Sheehan Disability scale).

In addition to the household surveys, a total of 4 Focus Group Discussions (FGDs) and 6 Key Informant Interviews (KIIs) were undertaken to provide qualitative information especially regarding certain areas, where it was felt that the survey method may not be adequately informative. These areas included patterns of substance abuse (both illicit–alcohol & tobacco, and illicit substances), issues relating to mental illness and homelessness, the perceived treatment gap, stigma experienced around mental health and the barriers / challenges to mental health care delivery.

Flow of Interview

The flow chart below provides details of conducting interviews using hand held devices that are loaded with all the study instruments.

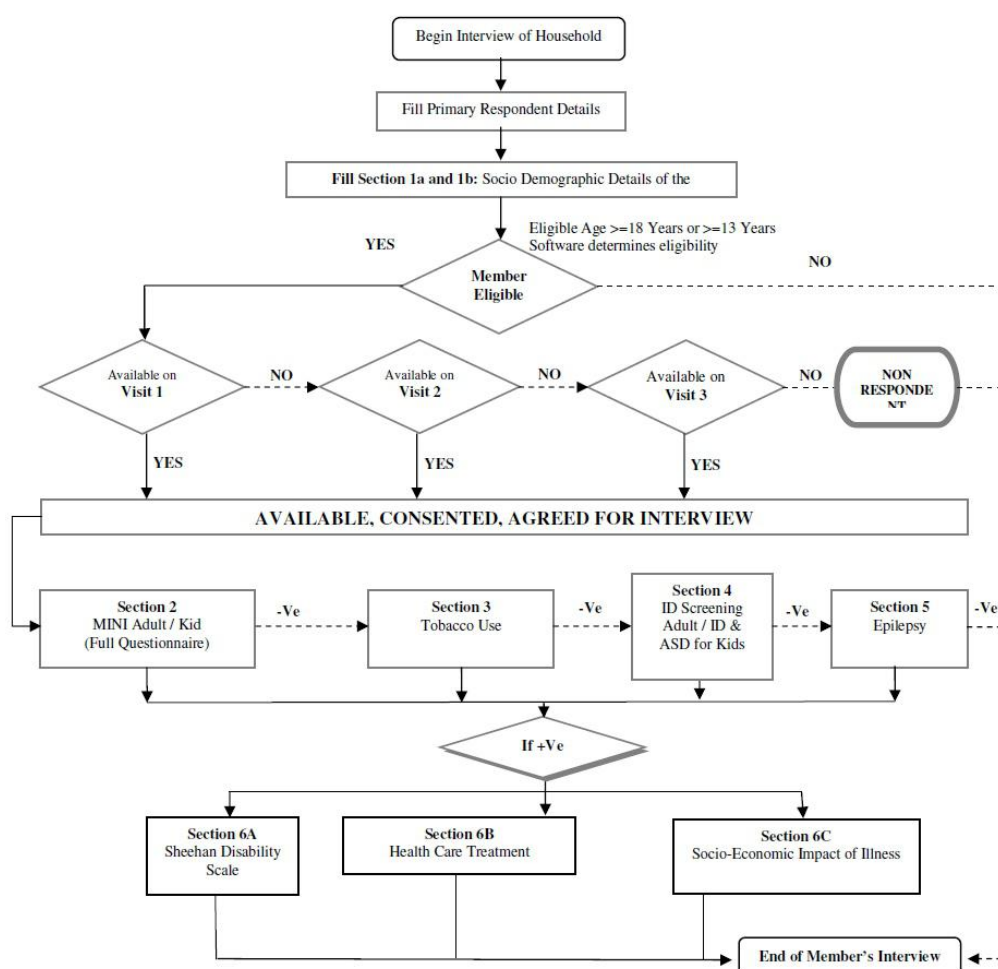


Figure- 4 Flow of interview during the Field Survey

Data collection process**A. State data collection team**

Data collection in the field was done by the **NMHS State Data Collection Team**, comprising of Field Data Collectors (FDCs), led by the Study Coordinator (SC). This team was trained in field survey and data collection methods over a 2 months programme at the Department of Psychiatry, AIIMS, Raipur, by the team of resource persons.



Figure-5: Training Program of NMHS, Chhattisgarh

B. Data collection and transfer

The field staff administered the 'Study instruments' using tablet computers (Dell Venue 8 Pro 5000 series). A specific flow of the interview was set, as depicted in the figure 4.

Record keeping

Various records (Table 2) were maintained by the FDCs, the Study coordinator and by the state team for monitoring the data collection process in order to ensure completeness and quality of the collected data.

Table 2: Summary of records maintained at different levels.

Category of NMHS study team	Type of record maintained	Focus of the form	Checked by	Frequency of maintenance
Field data collectors (FDCs)	Form 1	Details of each and every contact made during a day of survey	Study coordinator	Daily
	Form 2	Summary of the day's field work	Study coordinator	Daily
Study coordinator	Form 1A	Details of re-interviews	State NMHS team	After conducting re-interviews (<i>usually daily</i>)
	Form 3A	Summary details of all the FDCs daily activity	State NMHS team	Daily
	Form 3B	Summary details of all the FDCs weekly activity	State NMHS team	Weekly
	Form 4A	Summary details of the survey in one cluster	State NMHS team and NIMHANS NMHS team	After completing survey in one cluster
State NMHS team	Form 4B	Summary details of the survey in one district	NIMHANS NMHS team	After completing survey in one district
	Form 1A	Details of re-interviews	-	After conducting re-interviews (<i>usually fortnightly</i>)

Monitoring

Monitoring of data collection, and quality checks, was done at multiple levels. A) The study coordinator supervised data collection on a regular basis. B) The state team visited survey clusters in each district to supervise data collection. C) 5% validation re-interviews were done by the study coordinator and the state team. The re-interview data analysis indicated a satisfactory agreement between interviews and the re-interviews D) The NIMHANS team evaluated the data and gave feedback at regular intervals, during the fortnightly video-conferencing meetings. E) Supervisory team from NIMHANS, Bangalore also visited the field survey sites. F) Multiple booster training sessions were undertaken at the field during the process of survey

Data analysis

Data was collected and compiled at the state level by the state team. It was transferred to NIMHANS, the coordinating center, for processing. It was checked for errors and subsequently edited and cleaned for duplicate entries, out of range values, etc., and used for analysis. Individual frequencies and descriptive statistics were obtained for the population. The unweighted estimates were obtained first, as the survey was based on a population that was representative, developed on a multi-stage random sample, weighted prevalence rates and estimates were obtained.

The state estimates have been calculated based on the probability of selection of districts and tehsils (for design weight) and the non-response rates at household and individual levels were factored. Weighted prevalence rates were estimated for *any mental morbidity* and also select conditions including tobacco use disorder, epilepsy and Intellectual Disability and were as per The International Classification of Disease, 10th revision, Diagnostic Criteria for Research (ICD 10 DCR) (Table 3). Current (Point) prevalence was reported for all diagnostic groups (ICD categories F10-19, F40-48), and both current and lifetime prevalence (ever in the life of an individual in the past) was reported for select conditions under F20-29, F30-39 and panic disorder.

Table 3: Notes on use of terms used in the presentation of mental morbidity data from the survey, and definitions for disorders

Term	Description
<i>Any mental morbidity</i>	<i>Disorders as per ICD10 DCR and captured by MINI instrument. This represents the mental disorder morbidity including substance use disorders but excluding suicidality.</i>
<i>Life time prevalence</i>	<i>Presence of disorders at any time in the life of an individual as determined by the MINI.</i>
<i>Current prevalence</i>	<i>Presence of disorders as per the current time period as determined by the MINI.</i>

Common mental disorder	<i>Common mental disorders include depressive disorders (mild, moderate and severe without psychotic features), neurotic and stress related disorders and alcohol and other substance use disorders.</i>
Severe mental disorder	<i>Severe mental disorders include Schizophrenia and other psychotic disorders, bipolar affective disorders, and severe depression with psychotic features.</i>
Tobacco use disorder	<i>The Fagerström instrument for tobacco dependence was modified to include non-smoking variety of tobacco use and the same was adopted with similar scoring system.</i>
Alcohol and other substance use disorders	<ul style="list-style-type: none"> - <i>Substance use disorders include tobacco use (low to significant dependence), alcohol use disorders and other substance use disorders.</i> - <i>Alcohol and other substance use disorders included dependence, abuse and harmful use as detailed in the ICD 10 DCR. The DSM IV dependence criteria is equal to the ICD-10 DCR criteria for dependence. For harmful use, as per the ICD 10 DCR, the criterion of DSM IV abuse and in addition substance use and its impact on physical and social areas was considered for ICD 10 DCR Harmful use</i>
Depressive disorders	<i>In diagnosis of depressive disorders, the MINI and DSM IV TR takes into account the item of dysfunction, while in the ICD-10 DCR, only number of symptoms are taken into consideration. Hence 4 or more symptoms were used to indicate a depressive episode as per the ICD 10 DCR criteria regardless of the item of dysfunction.</i>

STATE MENTAL HEALTH SYSTEM ASSESSMENT

The State Mental Health System Assessment (SMHSA) was the other component of the NMHS. It was designed to systematically assess the existing mental health resources and services in the state. The goal was to supplement information obtained from the NMHS and support mechanisms for strengthening the existing mental health services in the state.

Objectives:

- a) To assess available health and health-related resources for mental health activities/programmes in the state
- b) To examine the status of mental health services and programmes in the state through a systems assessment framework.

Methodology:

Tools were designed for the state and district level mental health systems assessment by the coordinating team at NIMHANS. These were based on/adapted from –a) WHO-AIMS and WHO-Atlas instruments, and b) Experience obtained from mental health system assessment in the state of Tamil Nadu and Kolar district in Karnataka.

The final tool had a set of 10 domains,

1. General information about the state
2. General health resources in the state

3. Existing mental health systems and resources in the state
4. Mental health policy & action plan
5. State authorities responsible for mental health activities
6. Legislation and implementation related to mental health
7. Financing & budgetary provisions for mental health
8. Intra- and inter-sectoral collaboration
9. Social welfare activities; engagement of civil societies in mental health programmes
10. Information, Education and Communication activities and monitoring

The Co-Principal investigator for NMHS in the state took upon the role of SMHSA coordinator, who along with the Co-Investigators worked under the guidance of the NIMHANS team to identify various sources of data. A list of relevant data sources was developed in consultation with NIMHANS team and included - Census documents, National Health Profile, state PIPs (Programme Implementation Plans), different documents in the state health departments, State Directorate of Economics and Statistics and State Crime Records Bureau. In addition, key persons/departments associated with general and mental health activities in the state – the Chief Medical Officers (CMOs) in the districts, Superintendents of state mental hospitals, departmental heads of psychiatry in medical colleges and other state run hospitals, and office bearers in the state mental health authority – were contacted. Suicide related data was obtained from the State Crime Records Bureau. All collected data was checked for utility and accuracy. A set of 20 quantitative and 10 qualitative indicators covering 10 essential domains of the mental health system, based on a scoring pattern was developed for assessment.



Figure-6 (A) State Level Consensus Meeting at the Directorate of Health Services, Raipur



Figure-7 (B) State Level Consensus Meeting at the Directorate of Health Services, Raipur.

A **state level consensus meeting (Figure 6& 7)** was held at the directorate of health services government of Chhattisgarh, Raipur. Representatives of state administration, NGO representatives, private practitioners in psychiatry and representatives from major mental health institutions in the state, as well as representative from NIMHANS core team attended this meeting. Data gathered by the NMHS state team was presented to arrive at general consensus and authenticate the findings. Consensus was also sought on the state level indicators.

Following the state consensus meeting, the SMHSA report was revised based on the discussions held during the meeting. The completed SMHSA proforma and the state score card with indicator values was reviewed and this final version was used to refine indicators as well as the state scorecard.

Overview of the data collection and finalization for the SMHSA is shown in Figure 8.

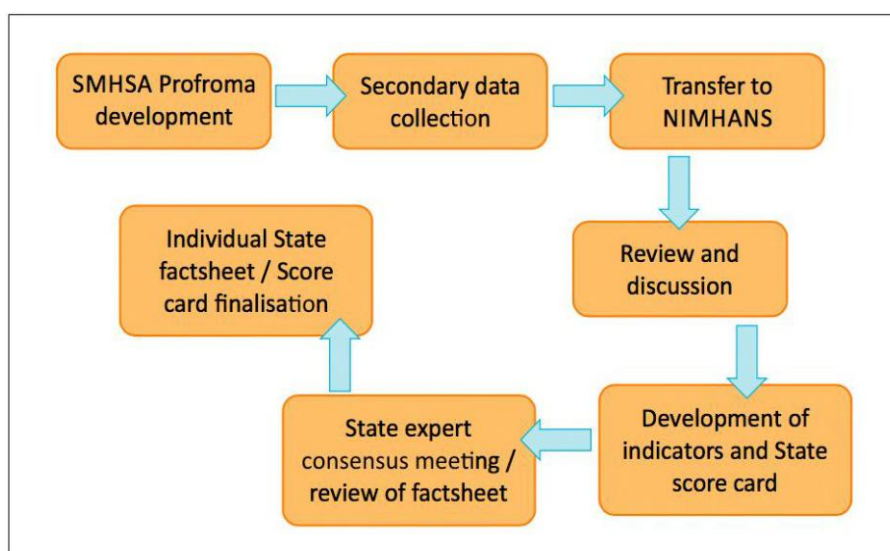


Figure 8: Overview of data collection process under SMHSA

Ten indicators had been identified to assess the mental health system of the state. The indicators were – Mental health policy, Mental health action plan, State mental health co-ordination mechanism, Budget for mental health, Training programme for mental health, Availability of drugs, IEC materials and Health education activities, Intra & intersectoral collaboration, Implementation status of legislation and Monitoring. Each of these mental health system assessment indicators were rated in a Likert scale of 0 to 10. The score decided for each of these indicators were based on the information available from various reliable sources regarding the mental health resources in the state of Chhattisgarh. Later on the scores for each indicator were confirmed as per the general consensus of experts of various fields in the state level consensus meeting.

Data analysis

The final data set uploaded onto the NIMHANS server consisted of 7 back up files for the state of Chhattisgarh, corresponding to the number of FDCs. In the first step, using the 'Red Gate MySQL data compare software'(64) all the files of the state were compared and merged to form one single data file which was in the SQL format. In the next step, the single data file was run in MOS software to get the final export file in '.txt' format which contained 6 different sub files (Enumerated individuals, Eligible members, Socio Demographic Information, MINI Interviews, Custom Modules and Additional Questionnaire). These 6 text files were later converted into the excel format and then merged using 'MySQL query' software to form one final data set (both in Excel & SQL format) for the state. The ICD-10 diagnostic variables were subsequently included into the final dataset using the software package 'SPSS version 22'(65). All merged final data were analyzed as per the plan of analysis using SPSS.

Individual frequencies and descriptive statistics were obtained for socio-demographic and economic characteristics of the sample for the entire data set (inclusive of all 12 states) as well as individually for each state. 2. In addition, amongst those with morbidity, the treatment gap, care related details, socio-economic impact and disability were calculated and reported. 3. Initially, the un-weighted estimates were obtained for different mental disorders and related characteristics, which permitted an overview of the data set. 4. Subsequently, weighted estimates were calculated

RESULTS

Mental morbidity survey

Population, Administrative and Economic Characteristics of Chhattisgarh

The state of Chhattisgarh has 18 districts, as of 2016, nine new districts having been formed since the last national census in 2011. The population, administrative and economic characteristics of the state is presented in table-4.



Table 4: Population, Administrative and Economic Characteristics of Chhattisgarh

Sl. No	Population Characteristics		Administrative and Economic Characteristics	
1	Population* (in crores)	2.55	Districts*(n)	18
2	Sex ratio * (females per 1000 males)	991	Districts as on 2016 [#] (n)	27
3	Male population *(%)	50.24	Taluka/Sub-district * (n)	149
4	Female population*(%)	49.76	Villages* (n)	20,126
5	<18 years age groups* (%)	38.16	Towns with 1 lakh to <1 million population* (n)	7
6	60 years and above age groups *(%)	7.84	Million plus cities*(n)	2
7	Overall literacy rate* (%)	70.28	Per capita income in 2013-2014 (in INR) ^{\$}	58,547
7.1	Male literacy rate*(%)	80.27	Poverty Headcount Ratio ^{\$\$}	40.19
7.2	Female literacy rate* (%)	60.24	Source: *Census 2011; # CG- http://explore-chhattisgarh.blogspot.in/2011/08/districtsof-chhattisgarh-18-existing-9.html ; \$-Central Statistical Organization; \$\$-NSSO 68th round.	
8	Urban population*(%)	23.24		
9	Tribal population* (%)	30.62		

Sample Selection and Characteristics

A representative sampling frame for the NMHS was selected. The 60 clusters needed for the survey were identified from 6 Tehsils, from 3 Districts in the state. A total of 738 households, with 3079 eligible individuals, were contacted. The final sample size achieved in this survey was 2841 adults, from 722 households, i.e. a response rate of >90 % (HH level 97.8% and Individual level 92.3%). Details of the sampling framework for the state are presented in table 5.

**Table 5: Sampling framework of National Mental Health Survey in Chhattisgarh
(Selection of households& individuals)**

Total no. of Districts	18
No of Districts Selected	3
Total no. of Taluka in the selected Districts	29
No of Taluka Selected	6
Total no. of Clusters in the Selected Taluka	1067
No. of Clusters selected	60
	
Total no. of Households in the selected Clusters	50,603
Total no. of Households Contacted	738
Total no of Households interviewed	722(97.8%)
	
Total no of eligible Individuals in the interviewed households (>18 years)	3079
Total no of eligible Individuals interviewed	2841(92.3%)

A. Overall prevalence rates for mental morbidity

Prevalence rates for mental morbidity, in terms of individual diagnostic categories in the ICD-10-DCR, are presented in Table 6. Rates are reported separately for substance use disorders and all other mental morbidity. Current prevalence of any mental morbidity was 11.66%, Depressive disorder 1.59% and Severe Mental morbidity was 0.77%. As high as 32.40% of the respondents reported mental and behavioral problems due to psychoactive substance use. It is estimated based on the results of this survey that nearly 2 million persons above 18 years of age are suffering from any mental morbidity (excluding tobacco use disorders). If tobacco is included, then the estimated numbers are likely to be in the range of 4.3 million. The most common among the mental health problems were substance use disorders (mainly tobacco and alcohol), depressive disorders and neurotic & stress related disorders (mainly phobic anxiety disorder and agoraphobia).

Table 6: Weighted Prevalence (%) of Mental morbidity as per ICD-10 DCR among adults 18+ years (n=3508)

ICD-10 DCR category	Lifetime (95% CI)	Current (95% CI)
<i>Any mental morbidity</i>	14.06 (13.83-14.29)	11.66 (11.45-11.87)
<i>F10-F19-Mental and behavioral problems due to psychoactive substance use</i>	32.40 (32.09-32.71)	
<i>F10 Alcohol use disorder</i>	7.14 (6.97-7.31)	
<i>F11-F19, except F17 Other substance use disorder</i>	1.29 (1.21-1.36)	
<i>F17 Tobacco use disorders</i>	29.86 (29.56-30.16)	
<i>F20-F29 Schizophrenia and other psychotic disorder</i>	0.8 (0.75-0.86)	0.43 (0.38-0.47)
<i>F30-39 Mood (Affective) Disorders</i>	4.44 (4.31-4.58)	1.81 (1.72-1.9)
<i>F30-31 Bipolar Affective Disorders</i>	0.51 (0.47-0.56)	0.29 (0.25-0.32)
<i>F32-33 Depressive Disorder</i>	3.99 (3.87-4.12)	1.58 (1.5-1.67)
<i>F40-F48 Neurotic and stress related disorders</i>	2.42 (2.32-2.52)	2.38 (2.28-2.48)
<i>F40 Phobic anxiety disorders</i>	1.86 (1.78-1.95)	
<i>F40.0 Agoraphobia</i>	1.5 (1.42-1.58)	
<i>F40.1 Social Phobia</i>	0.41 (0.37-0.45)	
<i>F41 Other Anxiety disorder</i>	0.33 (0.29-0.36)	0.29 (0.26-0.33)
<i>F41.0 Panic disorder</i>	0.12 (0.09-0.14)	0.08 (0.06-0.1)
<i>F 41.1 Generalized Anxiety Disorder</i>	0.14 (0.12-0.16)	
<i>F41.9 Panic disorder with limited symptoms</i>	0.07 (0.05-0.09)	
<i>F42 Obsessive Compulsive Disorder</i>	0.45 (0.4-0.49)	
<i>F42.0 to 42.8 OCD current</i>	0.29 (0.26-0.33)	
<i>F42.9 OCD NOS</i>	0.45 (0.4-0.49)	
<i>F43 Reaction to severe stress and adjustment disorders</i>	0.03 (0.02-0.05)	

Common and severe mental morbidity

Common mental morbidity was reported in 11.2% of the sample (Table 7). These were most prevalent in the 50-59 years age group (14.1%). Urban non metro areas recorded higher prevalence (13.59%) of these disorders. Prevalence of common mental disorder was high among male (common mental disorder 17.85% in males Vs 5.03% in females). These high rates make it imperative that common mental morbidity be a primary target for identification and treatment.

Table 7: Prevalence of common mental morbidity by age, gender and residence (%)

Characteristics	Lifetime (95%- CI)	Current (95%- CI)
Total	13.26 (13.03-13.48)	11.2 (11-11.41)
Age Group		
18-29	9.57 (9.25-9.88)	8.56 (8.27-8.86)
30-39	15.73 (15.18-16.27)	12.88 (12.38-13.38)
40-49	15.43 (14.86-15.99)	12.83 (12.31-13.36)
50-59	16.38 (15.69-17.08)	14.10 (13.45-14.75)
60 and above	14.54 (13.91-15.18)	11.58 (11.01-12.16)
Gender		
Female	7.53 (7.29-7.77)	5.03 (4.83-5.23)
Male	19.41 (19.04-19.79)	17.85 (17.49-18.21)
Residence		
Rural	12.76 (12.51-13.01)	10.58 (10.35-10.82)
Urban non-metro	14.85 (14.1-15.6)	13.59 (12.87-14.32)
Urban metro	15 (14.37-15.63)	13.08 (12.48-13.67)

Severe mental morbidity was present in 0.77% of the sample (Table 8). The prevalence was highest in the youngest age group of the sample (40-49 years – 1.31%), was higher in males (0.81%) and in those from rural areas (0.79%). While common mental disorders pose challenges in terms of the large number of people that would require treatment and care, severe mental disorders can lead to significant disability that continues for many years, mandating the need for longitudinal care beyond symptom control.

Table 8: Prevalence of severe mental morbidity by age, gender and residence (%)

Characteristics	Lifetime (95%- CI)	Current (95%- CI)
Total	1.37 (1.29-1.45)	0.77 (0.71-0.82)
Age Group		
18-29	1.4 (1.28-1.53)	0.77 (0.68-0.86)
30-39	1.49 (1.31-1.67)	0.68 (0.55-0.8)
40-49	1.69 (1.49-1.9)	1.31 (1.13-1.49)
50-59	0.95 (0.77-1.13)	0.24 (0.15-0.33)
60 and above	1.06 (0.87-1.24)	0.66 (0.51-0.8)
Gender		
Female	1.26 (1.16-1.36)	0.72 (0.65-0.8)
Male	1.49 (1.37-1.6)	0.81 (0.72-0.89)
Residence		
Rural	1.1 (1.02-1.18)	0.79 (0.73-0.86)
Urban non-metro	2.71 (2.37-3.06)	0.54 (0.39-0.7)
Urban metro	1.92 (1.68-2.17)	0.77 (0.61-0.92)

*Reporting of weighted estimates or the small numbers of cases may contribute to such prevalence estimates

Socio-economic factors could play a role in the access to and pattern of help seeking for mental health problems. Interestingly, the prevalence of mental morbidity in the sample varied across socio-economic characteristics. It can be seen from table-9 that the upper middle income group had higher rate of mental morbidity (14.68%) when compared to the lowest income group (11.66%).

Table-9: Prevalence of mental morbidity as per income quintile (%)

Characteristics	Current(95%-CI)	Life time(95%-CI)
Total	14.06 (13.83-14.29)	11.66 (11.45-11.87)
Income quintile		
Lowest quintile	10.07 (9.62-10.53)	8.63 (8.21-9.06)
Second quintile	13.21 (12.67-13.75)	11.10 (10.6-11.6)
Middle quintile	14.48 (13.99-14.97)	10.90 (10.46-11.33)
Fourth quintile	16.47 (15.92-17.02)	14.68 (14.16-15.21)
Highest quintile	15.54 (15.04-16.04)	12.74 (12.28-13.2)

B. Prevalence rates for individual disorders with respect to socio-economic characteristics***Age group***

Among common mental health disorders, depression is more common in middle-aged individuals. The usual age group most affected by a disorder has public health relevance in terms of screening for disorders in the community and designing healthcare delivery depending on the target group. From the table-10 below it can be seen that schizophrenia and other psychotic disorders, the most severe mental morbidities, were most prevalent in the 30-39 years age group (0.60%) and 40-49 years age group (0.60%). Bipolar affective disorder was most prevalent in the 40-49 years age group (3.42%). Depressive disorders were most prevalent in the 40-49 years age group (3.02%), while neurotic and stress related disorders were commonest in the 18-29 years group (2.68%). Substance use disorders had the highest prevalence (12.84%) in the 50-59 years age group; while the same was true for alcohol use disorders (11.02% prevalence in the 50-59 years group); tobacco use disorders peaked in the 50-59 years age group (45.02%).

Table 10: Current Prevalence rates of individual disorders with respect to Age group

Disorder	Total prevalence [% (95%CI)]	Prevalence in 18-29 years [% (95%CI)]	Prevalence in 30-39 years [% (95%CI)]	Prevalence in 40-49 years [% (95%CI)]	Prevalence in 50-59 years [% (95%CI)]	Prevalence in >= 60 years [% (95%CI)]
Schizophrenia & other psychotic disorders	0.43 (0.38-0.47)	0.41 (0.34-0.48)	0.60 (0.49-0.72)	0.60 (0.48-0.73)	0.12 (0.05-0.18)	0.26 (0.17-0.35)
Bipolar affective disorder	1.81 (1.72-1.9)	1.49 (1.36-1.62)	1.33 (1.15-1.5)	3.42 (3.13-3.7)	0.67 (0.51-0.82)	2.36 (2.08-2.63)
Depressive disorders	1.59 (1.5-1.67)	1.26 (1.14-1.38)	1.33 (1.15-1.5)	3.02 (2.75-3.29)	0.55 (0.41-0.69)	1.96 (1.71-2.21)
Neurotic and stress related disorders	2.38 (2.28-2.48)	2.68 (2.51-2.85)	2.78 (2.53-3.02)	2.10 (1.87-2.32)	1.14 (0.94-1.34)	2.49 (2.21-2.77)
Any substance use disorder#	7.89 (7.72-8.07)	4.89 (4.66-5.12)	10.00 (9.55-10.45)	8.5 (8.06-8.94)	12.84 (12.22-13.47)	8.03 (7.54-8.52)
Tobacco use disorder	29.86 (29.56-30.16)	14.57 (14.19-14.95)	31.95 (31.25-32.65)	44.69 (43.91-45.47)	45.02 (44.08-45.95)	36.98 (36.11-37.85)
Alcohol use disorder	7.14 (6.97-7.31)	4.47 (4.25-4.69)	9.65 (9.21-10.09)	7.51 (7.1-7.93)	11.02 (10.43-11.6)	7.00 (6.54-7.46)

*Reporting of weighted estimates or the small numbers of cases may contribute to such prevalence estimates

Except Tobacco use disorder

Gender

Males had a higher prevalence of substance use disorders (15.75), including tobacco (41.47) and alcohol (14.58). Females had a higher prevalence of schizophrenia and other psychotic disorders (0.49), bipolar affective disorder (2.26), depressive disorders (2.09) and neurotic and stress related disorders (2.93) (Table 11).

Table 11: Gender-wise current prevalence rates of individual disorders

Disorder	Total prevalence [% (95%CI)]	Prevalence in Males [% (95%CI)]	Prevalence in Females [% (95%CI)]
Any substance use disorder#	7.89 (7.72-8.07)	15.75 (15.41-16.1)	0.57 (0.5-0.64)
Tobacco use disorder	29.86 (29.56-30.16)	41.47 (41.01-41.94)	19.04 (18.68-19.4)
Alcohol use disorder	7.14 (6.97-7.31)	14.58 (14.25-14.92)	0.20 (0.16-0.24)
Schizophrenia & other psychotic disorders	0.43 (0.38-0.47)	0.35 (0.29-0.41)	0.49 (0.43-0.56)
Bipolar affective disorder	1.81 (1.72-1.9)	1.33 (1.22-1.44)	2.26 (2.12-2.39)
Depressive disorders	1.59 (1.5-1.67)	1.04 (0.94-1.13)	2.09 (1.96-2.22)
Neurotic and stress related disorders	2.38 (2.28-2.48)	1.8 (1.67-1.92)	2.93 (2.78-3.08)

Except Tobacco use disorder

Place of residence-

Table-12 indicated that, Substance use disorders had the highest prevalence (11.68%) in the urban non metro; while the same was true for tobacco use disorders (11.68% prevalence in the urban non metro). However, tobacco use disorder was peaked in urban metro (2.31%).

Table 12: Prevalence rates of individual disorders with respect to Place of residence

Disorder	Total prevalence [% (95%CI)]	Prevalence in Rural [% (95%CI)]	Prevalence in Urban non-metro [% (95%CI)]	Prevalence in Urban metro [% (95%CI)]
Any substance use disorder#	7.89 (7.72-8.07)	6.88 (6.69-7.06)	11.68 (11-12.35)	5.38 (4.98-5.78)
Tobacco use disorder	29.86 (29.56-30.16)	6.88 (6.69-7.06)	11.68 (11-12.35)	5.38 (4.98-5.78)
Alcohol use disorder	7.14 (6.97-7.31)	1.14 (1.06-1.22)	1.05 (0.84-1.27)	2.31 (2.04-2.57)
Schizophrenia & other psychotic disorders	0.43 (0.38-0.47)	0.42 (0.37-0.47)	0 (0-0)	0.77 (0.61-0.92)
Bipolar affective disorder	1.81 (1.72-1.9)	1.88 (1.78-1.98)	0.54 (0.39-0.7)	2.31 (2.04-2.57)
Depressive disorders	1.59 (1.5-1.67)	1.66 (1.56-1.75)	0.00 (0-0)	2.31 (2.04-2.57)
Neurotic and stress related disorders	2.38 (2.28-2.48)	2.18 (2.07-2.28)	1.42 (1.17-1.67)	4.23 (3.87-4.59)

*Reporting of weighted estimates or the small numbers of cases may contribute to such prevalence estimates

Except Tobacco use disorder

Moreover, table 12 indicated that, the prevalence across schizophrenia & other psychotic disorder disorders (0.77), bipolar affective disorder(2.31), depressive disorder(2.31) and neurotic and stress related disorders (4.23) is higher in the urban metros, when compared to the rural and urban non-metros.

C. Prevalence rates of Intellectual Disability and Epilepsy

Intellectual disability

The prevalence of intellectual disability was found to be 0.69% (95%CI=0.64-0.74). Among the different age groups the prevalence varied between 1.08-1.42%, with the highest prevalence in the 30-39 years group (1.25%). Females reported higher prevalence rates (0.93), further, place of residence showed differences here too, with the rural areas having the highest prevalence (0.83).

Epilepsy

Prevalence rates of epilepsy in this survey are based on questions asked about generalized tonic clonic seizures. A prevalence rate of 0.19% (95%CI=0.16-0.22) was found. Males had a rate (0.22%, 95%CI=0.13-0.21) higher than females (0.17%, 95%CI=0.13-0.21). Among the age groups prevalence rate was highest for 50-59 years group (0.79%, 95%CI=0.63-0.79). Urban metro areas had a higher prevalence (0.38%, 95%CI=0.27-0.49) than urban non metro and rural areas.

D. Suicide incidence rate and High suicide risk

Suicide incidence rate

Suicide data in the state of Chhattisgarh were obtained from the State Crime Records Bureau, for the year 2014-15. The data in table 13 gives us the incidence of suicide (number of suicides per 100,000 populations over the 1-year period). The overall incidence rate was 22.40/100,000. Males had a higher incidence than females. Incidence rate peaks at 37.94/100,000, and in the age group of 18-29

Table-13 Suicide incidence rate (per 10, 00,000)

Characteristics	Incidence rate
Total incidence rate	22.40
Gender	
Male	29.32
Female	15.10
Age group	
<14 years	1.28
14 -17 years	20.37
18-29	37.94
30-44	32.91
45-59	32.44
60 and above	18.06

Source: National Crime Records Bureau-2014

Prevalence of high suicide risk

Questions were asked during the conduct of NMHS to estimate suicide risk. *High risk* (defined as a score of ≥ 17 on the suicidality module in the MINI 6.0) was detected in 0.28% (95%CI=0.25-0.31) of the sample (Table 14). This *high risk* was most prevalent in the 18-29 years group (0.65%). Males had a higher prevalence of risk (3.7%) than females (0.18%) and like for most of mental morbidity, sample from the rural reported a higher prevalence rate (0.37%) than the non-metro and metro urban areas.

Table 14: Prevalence of Suicidal risk by age, gender and place of residence (%)

Characteristics	High risk(95% - CI)
Total	0.28 (0.25-0.31)
Age group	
18-29	0.65 (0.56-0.73)
30-39	Not reported
40-49	Not reported
50-59	0.28 (0.18-0.38)
60 and above	Not reported
Gender	
Male	0.37 (0.32-0.43)
Female	0.18 (0.14-0.22)
Residence	
Rural	0.37 (0.32-0.41)
Urban non-metro	Not reported
Urban metro	Not reported

E. Impact of Mental Morbidity and Treatment seekingDisability

Mental illnesses are chronic and also prone to relapse. As a result they are associated with significant disability. In the present survey disability was recorded on the Sheehan disability scale. Of the 328 subjects with mental disorder, disability was reported by nearly half of the population (40.54% in work life, by 42.98% in social life and by 44.51% in family life (Table 15). Among those with disability, Extreme disability was present in 2.25% for the work domain, 2.83% for the social domain, and in 4.79% for the family domain (Table 15).

Table 15: Self-Reported Disability among respondents with current mental Illness (n=328)

Domain	Disability present n (%)	Extreme disability n (%)
Work life	133 (40.54)	3 (2.25)
Social life	141 (42.98)	4 (2.83)
Family life	146 (44.51)	7 (4.79)

Socio-economic impact of illness

The socio-economic impact of illness was studied in this survey for both the mentally ill person and his/her family members (Table 16). A person with mental morbidity reported difficulty in carrying out his/her daily activities for a median 15 days in a month; family members were not able to go to work for a median duration of 5 days in a period of 3 months. Moreover, in a year they miss social/leisure activities because of having to care for the ill person for a median duration of 15 days. It was also reported, that a median amount of INR 1000 per month is spent on the care of a mentally ill person.

Table- 16 socioeconomic impact of mental morbidity

Socio economic impact (n=328)	
Median number of days with difficulties to carry daily activities, in the past 30 days	15 days
Median number of days family members were not able to go for work in the past three months, for care of the patient	5 days
Median number of day's family, social or leisure activities was missed.	15 days
Median monthly expense (Indian rupees)	1000 rupees

Treatment seeking

Treatment seeking behaviors and patterns were assessed for the mentally ill persons in the sample (Table 17). A large percentage (78.35%) of those with mental morbidity, were not on treatment, even though they had been ill for a median duration of more than 8 years (100 months). Among those who sought consultation, 5 months (median duration) of illness had lapsed before they sought care. A median number of 2 care providers had been consulted; government doctors were consulted by 56% of the sample.

Table 17: Treatment patterns & care characteristics among respondents with current mental morbidity

Characteristics (n=328)	
Currently on treatment	71
Treatment gap (%)	78.35
Median duration of illness (in months)	100 (1-500)
Median Interval between onset of illness and consultation (in months)	5 (1-120)
Median number of treatment providers consulted	2 (1-5)
Most recent provider being a government doctor - n (%)	56 (78.87%)
Median duration of being on treatment (in months)	40 (6-120)

Mental health system assessment

A. Status of general healthcare facilities in the state

Mental healthcare services are one part of the entire healthcare machinery in the state. If the general healthcare services in a state are in a poor shape, it would be unreasonable to focus on the poor state of mental health alone. The lowest tiers of public health facilities in Chhattisgarh, the Sub-Centers, are 20.30 per 1 lakh population, i.e. 4925 people rely on one sub-center for most basic healthcare. Primary Health Centers (PHCs) are 3.09 per 1 lakh population, thus giving coverage of 32,535 populations per PHC. Similar is the case with the availability of health professionals in the state, with about 0.90 specialists per 1 lakh population, and about 5.00 MBBS doctors per 1 lakh population.

B. Status of mental healthcare facilities in the state

The District Mental Health Programme (DMHP) is in 9 districts and covers 33.33% of the districts in the state; this caters to about 67.74% of the state's population. Notably, 3 districts were brought under DMHP recently, under the 12th five-year plan. . There are 2 mental hospitals, 6 medical colleges with psychiatric departments, and 16 general hospitals with psychiatry units in the state. Thus, psychiatric care facilities are less than 1 (0.08) per 1 lakh population. 66.67% of the district hospitals in the state have mental health services. While there is 0.44 in-patient bed per 1 lakh population, presence of mental health professionals is inadequate: less than 1 psychiatrist per 1 million population . Clinical psychologists and psychiatric social workers are less than 1 per million populations.

A way to make up for the shortage of mental health professionals in the state would be to train other health professionals. While DMHP routinely carry out such training programmes, there are only 21 MBBS doctors and 7 nurses trained, on record, in the last 3 years. These represent only 1.64% MBBS doctors and 0.09% of all nurses present in Chhattisgarh.

C. The mental health score card for Chhattisgarh (Figure 9)

Figure 9 presents the mental health scorecard for Chhattisgarh. The indicators on the scorecard are qualitative findings from the Mental Health System Assessment in the state. The scorecard reveals that the state does well on areas such as – state mental health coordination mechanism, availability of drugs, and implementation status of legislation. Chhattisgarh does not have its own mental health policy or a mental health action plan. There is, therefore, no clear direction to steer mental health activities in the state. The national mental health policy has been adopted by the state, but this has not led to any documented

roadmap. Substantial mental health initiatives have been made in Chhattisgarh. However, given the absence of a documented state policy & a mental health action plan, intra and inter-sectoral collaboration, absence of monitoring system, IEC material and monitoring mechanisms, the state has a long way to go where establishing optimal mental health facilities is concerned.

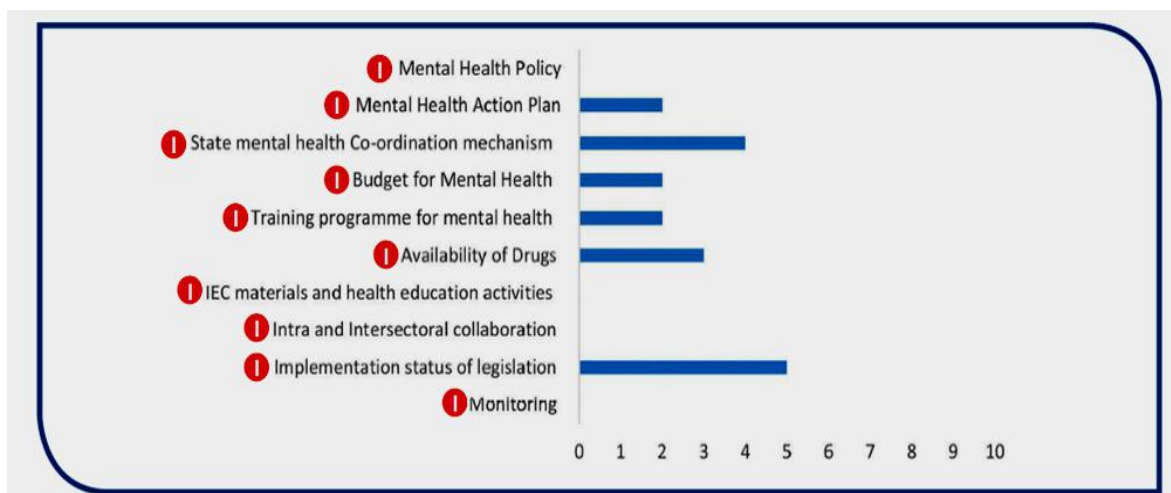


Figure 9: Mental health scorecard for Chhattisgarh

Overall summary of Results

Current prevalence of any mental morbidity was 11.66%. As high as 32.40% of the respondents reported mental and behavioral problems due to psychoactive substance use. The most common among the mental health problems were substance use disorders (mainly tobacco and alcohol), depressive disorders and neurotic & stress related disorders (mainly phobic anxiety disorder and agoraphobia). Substance use disorders had the highest prevalence (11.68%) in the urban non metro; while the same was true for tobacco use disorders (11.68% prevalence in the urban non metro). The overall incidence rate of suicides was 22.40/100,000. Males had a higher incidence than females. Less than 50% of districts were covered under District Mental Health Program (DMHP). As evident from the score card, the state didn't have a State mental health policy and availability of mental health action plan was also not uniform through all districts. No separate budget was allocated for mental health in the state. Availability of trained manpower, drugs and IEC material were inadequate. Inter-sectoral collaboration was almost non-existent.

RECOMMENDATIONS

Mental health care needs integration not only inside the health care system but across different sectors in the socio cultural, economic, political and religious architecture in the nation. The health care system should be able to address the felt as well as unfelt need for care of mental illness and for improvement of mental health as per the scope of different health care facilities in the health care delivery system of our country. New legislations and changes in policies (mental health care bill and national mental health policy) can be proved successful only with the combined efforts from all the stake holders

The National Mental Health Survey, 2016, conducted across 12 states of the country, followed a uniform and standardized methodology, with the objectives to know the burden, available infrastructure and gaps in care component is unique attempt for developing a roadmap for mental health services in the country and in individual states.

This survey found a prevalence of around 11.66% for mental morbidity and 29.86% prevalence of tobacco use disorders in the state. The mental health system assessment revealed that there is scarcity of resources for mental health care delivery in the state. The burden of mental illnesses found including substance use disorders in the community warrants urgent attention of the policy makers, and health professionals, as well as all responsible citizens of this society.

Keeping in view the survey results, opinion of stake holders & community respondents in the state of Chhattisgarh, the following 13 point major recommendations may be proposed to improve the mental health care services in the state.

13 point recommendations to improve mental health care in the state of Chhattisgarh	
Activities	Remarks
1. A state specific mental health policy in the light of National mental Health Policy should be developed to formulate the road map of activities for the state of Chhattisgarh.	<ul style="list-style-type: none"> • By the end of 2018 • Sensitization of the policy makers to policy development is a long process
2. A state mental health action plan should be developed with clear set of activities for proper implementation of the state mental health policy and to achieve the goals as set out under the existing National Mental Health Programme (NMHP) such as: <ul style="list-style-type: none"> - Community level interventions on preventive and promotive mental health - School and college mental health programs - Life-skills and family enrichment programs - Capacity Building of grassroots workers like ASHA for prompt referral 	<ul style="list-style-type: none"> • Plan activities for State, District and sub- district level in a phase wise manner • Compile ,edit and finalize activities in consultation with Stake holders to make the final State Action plan • First phase of activities to start from October 2018
3. Proper allocation of funds with clear demarcation for mental health in the state health budget with robust mechanisms for timely disbursal, utilization and accountability.	<ul style="list-style-type: none"> • Sensitization of legislators and bureaucrats for budget allocation • To strengthen IEC activities and access to mental health facilities in primary

4. Sensitization of the policy makers and state administrators on the current status and future requirement for mental health services so that Mental Health can be placed as a priority in the public health agenda of state	<p>health care.</p> <ul style="list-style-type: none"> • Simultaneously with the discussion for Budget
5. Capacity building of the Doctors working in primary health care institutions and NGOs working in the area of mental health in the state of Chhattisgarh. AIIMS Raipur may be recognized as the Nodal centre for this activity.	<ul style="list-style-type: none"> • Training and re-training programs to be conducted at AIIMS Raipur regularly with technical and financial aid from NIMHANS/ Ministry of Health. • To train 50 medical officers in a phase wise manner in consultation with the state Govt. within next 1 year.
6. Development of proper regulatory framework and roadmap of activities for the NGOs as a part of the state mental health policy.	<ul style="list-style-type: none"> • By 2019 along with state Mental Health Policy • Capacity building to be done at AIIMS Raipur
7. Establishment of full-fledged Program management unit in Directorate Health Services, of which Mental Health will be a part.	<ul style="list-style-type: none"> • In consultation with concerned department of state government.
8. Formulation of agenda with timeline for integrating mental health care activities with primary health care with inbuilt monitoring system.	<ul style="list-style-type: none"> • Training of Doctors and paramedical staff on Mental Health to be completed prior to integration with primary health care. It will be an ongoing process.
9. Up-gradation of mental healthcare facilities in the state including opening of postgraduate teaching in medical colleges in psychiatry.	<ul style="list-style-type: none"> • In close collaboration with Directorate of Health Services and Directorate of Medical Education of the state
10. IEC materials in local languages have to be developed and frequency of awareness campaigns needs to be increased in the communities to reduce stigma and improve awareness in mental health.	<ul style="list-style-type: none"> • With the help from state IEC cell , step by step activity may be started from April/ May 2018
11. Activities with intra and inter-sectoral collaboration related to mental health to be undertaken bi-monthly/quarterly basis so that quality of activity would improve and unnecessary duplication of work can be avoided. For example, convergence in planning and implementation for Rehabilitation of Mentally ill between Department Social Welfare and Ministry of Labour at State level.	<ul style="list-style-type: none"> • Political will has to be gained with repeated emphasis on these recommendations
12. A separate public health cadre in the state can be entrusted with the responsibilities like proper implementation, monitoring, supervision and evaluation of health programs and policies (Mental health will be one among those).	
13. For proper implementation of mental health legislations and particularly those related to alcohol, tobacco and other substance use in Chhattisgarh, activities like monitoring the sell, use and advertisement of these substances may be done with interdepartmental collaboration	<ul style="list-style-type: none"> • In consultation with concerned department of state government.

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Annexure-1

Snapshots of research activities during NMHS





Annexure-2

Experience-1

Having been part of the National Mental Health Survey, AIIMS, Raipur in collaboration with NIMHANS, Bangalore has been, from my point of view, a unique experience. The notable ones are

- Experience for facing the challenges during the survey by my team and me.
- Contents of training modules are sufficient to understand all aspects of this survey
- Presentation of resource person during training was excellent.
- During training, I developed expertise on MINI modules due to positive interaction and healthy discussion with resource persons
- The first time, I collected data on tabs; this has been an amazing experience for me.
- Sometimes, during the interview, I faced few problematic issues regarding to software of MINI modules.
- Chief Medical Officers, Block Medical Officers, Paramedical Personnel, Health Workers, and Anganwadi Workers have cooperated in conducting this study.
- During the personal interview, I sometimes faced negative experience due to unhealthy interaction with the head of households and others family members. .
- Another, strength of our team was the mix of competencies we had like, psychologist, sociologist and social workers as team members
- I developed some skill during this survey like expertise in diagnosis, how to reduce the non-response rate and how to develop group cohesiveness among team members.
- Thanks to Dr. Girish N Rao, Dr. Lokesh Kumar Singh, and Dr. Anjan Kumar Giri who conducted the survey and to my team for the months of work and fun we spent together.

With regards

(Dr. Khan Abraruzzaman Khan)

Study Coordinators

Experience-2

I remembered the day when I got appointed to work in NMHS under the direction of AIIMS Raipur in department of psychiatry. It was a day of excitement and curiosity for me

- It was almost fifty days of training where our trainers brought us across different types of cases.
- During initial weeks of training on tablet I found difficulty in handling it.
- According to my experience, training has given us extra advantage to deal with things easily and in a simplified manner. .
- Our PI and Co PI supported us very well even our coordinator is also a good guide.

- What I had learned from this project is very precious and valuable for me and for my career prospects too.
- Experience of working with team is also amazing and awesome.
- We all enjoyed during our assignment and were very committed towards our work and always tried to give cent percent of our skills and experience for the completion of this task.

Thanks to all members related to this project.

With regards

(Umesh Kumar Vaidya)

FDC-5

Experience-3

- From the day 1 of our training we felt that our job was quite challenging. In our training period we have learned a lot from our PI and Co-PI how to tackle this type of patients.
- Our PI also provided us patients and asked us to diagnose them which proved to be very helpful for our study.
- On the final stage of our training we went for demo to the nearby village with our mini tab. There we practised our interviews and that's how training period was completed.
- Working in team seems to be quite challenging but we have managed very well and also our coordinator supported us fantastically to do our job efficiently.
- Our Coordinator also managed things very well and provided us good environment for working as a team.
- We all used to share our experiences and knowledge with each other.
- After completing each and every block we had to report to our headquarters where our PI used to take meetings and discussed with us issues and challenges which we faced during our visit.
- Overall my experience of working in this project is quite good where I have got enough opportunity for learning different things which may be very helpful for my future growth.
- Working in team was quite challenging for me because as I am a fresher I didn't have any experience of working in team but I have managed well with my efficient team and worked hard with them to complete our job.
- I am very much thankful to my PI and Co- PI who made us capable for doing such an interesting job

With Regards

(Chandra Pratap Lodhi)

FDC-6

Experience-4

- Working in project of NMHS was very much challenging for me.
- On very first day of my training till the last day of my training days I kept on learning and understanding things that how we need to proceed on work.
- This type of project was something new to all my team members.
- I felt little difficulties in handling tablet during our training days but after getting used to it, I had never witnessed any type of problem.
- When we started our work after completing training I felt my job is very easy and simple. .
- It was my first experience to work in health sector especially in the department of psychiatry.
- My experience in this project is wonderful and I hope it will prove beneficial for me as well as for the welfare of the society.

Thanking you

With regards

(Roshan Lal)

FDC-7

Experience-5

I learned many things about interview methods, how to select the proper approach to a problem, and much about refining and applying my analytical skills.

- During the personal interview, I faced negative experience due to unhealthy interaction with the head of households and others family members. I faced bad experience during revisit of the household.
- I developed some skill during this survey like expertise in diagnosis and how to reduce the non-response rate.
- Thanks to Dr. Girish N Rao, Dr. Lokesh Kumar Singh, Dr. Anjan Kumar Giri, Dr. Khan Abraruzzaman Khan and all FDCs of NMHS, CG who conducted the survey.

With regards

(Deepak Pandey)

FDC-2

Experience-6

- I had done post-graduation in sociology and was appointed as field data collector in NMHS project.
- Initially I was thoroughly trained in psychiatry terminology by our respected principal investigator. Initially the process of learning was tough which was simplified by our principal investigator.

- During the training I learnt to run all the basic and advance functions of tablet.
- Initially during the process of data collection I faced few difficulties regarding entry of data in tablets and in gaining confidence in dealing with members of the study families in field.
- During interview, the family members some time showed reluctance in sharing views with us and some had even denied giving interviews.
- I became more acquainted in dealing with such aspects of data collection by constant support and guidance from the state team and principal investigator.
- We had to work in day time and our project work was continuing even in summer. It was difficult working in day time in hot summers.
- During the data collection the stay was comfortable and most of the time I found most of the people cooperative.
- All over, I experienced the whole project as a new learning experience and an enjoyable journey.

With regards

(Hiral Lal Yadu)

FDC-4

Experience-7

Over all it was nice experience of my life.

- This being my third job after completing my masters in social work, I got opportunities to experience the real life situation of different strata of our society.
- I got to learn a lot about psychiatry during my training.
- I had some difficulties with tablets during starting days of field data collection.
- I bought a window mobile phone with my first salary and operation of mobile phone helped me to handle tablets in better way.
- This job helped me immensely to improve my communication skill and I am more confident in meeting and interacting with people.

With regards

(Rahul Pandey)

FDC-8