



PREVALENCE OF COMMON MENTAL DISORDERS AND ASSOCIATED FACTORS AMONG ADULTS IN RURAL AREA: A COMMUNITY BASED CROSS SECTIONAL STUDY.

Community Medicine

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ABSTRACT

Background: Common Mental Disorders are non psychotic affective disorders (depressive and anxiety disorders). Majority of these are either undiagnosed or not satisfactorily treated. In most of the low- and middle-income countries, the idea of primary care for mental health is yet to be understood. We undertook this study to estimate the prevalence of common mental disorders and study its Sociodemographic correlates in rural area. **Materials and Methods:** A cross-sectional study was carried out among 319 study participants aged 18 and above with Patient Health Questionnaire-9 (PHQ-9). Data were collected using Questionnaire and were analysed using SPSS version 16.0. Association between CMDs and socio-demographic factors were estimated. **Results:** The overall prevalence of mental disorders was found to be 12.5%. Among the diagnosable group, depression (4.1%) was most prevalent, followed by anxiety disorder (2.2%) and panic disorder (1.6%). Depression with anxiety 0.9%, Attention deficit 0.6% Mood disorder 0.6%, somatoform disorder 0.6%, adjustment disorder, alcohol dependence, alcohol withdrawal, bipolar disorder, mental retardation and seizure disorder each contribute to 0.3%. There was association between the socio-demographic factors and Common mental disorders. **Conclusion:** The study revealed that Common Mental Disorders (CMD) were prevalent among the rural population, which calls for routine screening for CMDs in primary care settings for early identification and appropriate interventions.

KEYWORDS

Common Mental Disorder, Depression, Anxiety, Rural, Prevalence

INTRODUCTION

The World Health Organization (WHO) Global Burden of Disease Study has estimated that mental disorders are most burdensome, around the globe and are likely to increase in subsequent decades. However these projections are based mostly on review of literature, and general population surveys. They have an impact on both the economic aspects and quality-of-life of the people^[1-3]. The socio-demographic changes, epidemiological transition, media revolution, and changing lifestyles has brought new challenges of man-made lifestyle – related problems. The social, biological and psychological strength of the past are slowly being replaced by a fragile new lifestyle of people, making them more vulnerable to social, mental, and psychological problems than before.

The National Mental Health Survey (NMHS)^[4] estimated that about 150 million Indians need care for mental disorders, and about 10% suffer from common mental disorders (CMD) such as depression, anxiety, emotional stress and suicide risk as well as alcohol and drug use. The results of a large-scale population-based cohort study of primary care patients emphasized that systematic mental health screening followed by feedback to the general practitioners regarding screening results can contribute to initiation and cessation of mental health care and raise awareness of the current needs of the patients^[5]. However, the number of specialized and general health workers dealing with mental health in low-income and middle-income countries is grossly insufficient^[5]. Depression is one of the most widespread illnesses that can affect anyone, anytime and anywhere. It is the commonest mental illness that often coexist with other serious illnesses^[6-8]. Depression may affect people at very young age, reduces the functional capacities and recur continuously, in this regards it is also significantly causing disability around the globe in terms of total years lost due to disability. In terms of type of life events, it is seen that depressed patients experience significantly higher proportion of life events related to death of a family member, personal health related events, bereavement, interpersonal and social events.

Our study area i.e. Amravati district comes under the Vidarbha region of Maharashtra. The eastern half of Maharashtra state has been in news in last two decades due to the large number of suicides in agricultural communities^[9]. It is proposed that these suicides have happened, by and large, due to issues related to agricultural yield, fluctuations in minimum support price, credit availability, income and weather

uncertainties^[10]. Beyond the problem of suicides in farmers, the findings of the Million Death Study suggest that suicide mostly kills individuals in their youth, with 40 per cent of suicide deaths in men and 56 per cent of suicide deaths in women occurred at ages 15–29 years, making suicide a leading cause of death in this age group^[11]. Mental health conditions are an important proximal risk factor for suicide. By far, the most common mental health conditions which contribute to this risk of suicide are depression and alcohol use disorders^[12]. Very few studies have used standardized tools to assess the burden of CMD, especially in rural area. Thus, there is a need to provide further evidence about the burden of common mental disorders especially in rural communities particularly using standardized tool and method. Community based studies are essential as they provide crucial information on prevalence of common mental disorders that aids in making public healthcare policies regarding prevention, control and treatment. In this context the present study was conducted to broaden our knowledge regarding prevalence of common mental disorders and to study the association of mental disorder with various socioeconomic variables in the rural population.

Objectives

1. To estimate the prevalence of common mental disorders among adults in rural area.
2. To find out the association of various demographic and socio-economic factors related to common mental disorders in selected subjects..
3. To suggest the recommendation based on study findings.

MATERIALS AND METHODS

Study Setting:

The study was conducted in rural area of Amravati District; this area comes under the rural health and training center which is a field practice area of our department of community medicine.

Sample Size Calculation:

Sample size was calculated by Open Epi6. Prevalence of CMD from previous study – 11.4%^[13], approximate target population – 15015, Design effect- 2, 3% absolute precision, 95% confidence interval and considering non response rate of 10%, the sample size calculated was 319.

Ethics Approval and Consent of Participants:

Written informed consent was obtained from all the participants. All consenting adults ≥18 years old who understood the questions and

instructions and were not limited by any severe illness that prevented them from giving the interview were included.

Prior to the start of the study, permission was obtained from the District Health Officer, Zilla Parishad Amravati and the support of the Taluka Medical Health Officer of the Morshi Taluka was sought. In addition, approval was obtained from all local village administrative bodies.

Baseline & Final Data Collection:

In the first phase the data collection tools were tested and finalised. This was followed by an anti-stigma campaign, which was rolled out for 1 month across all the villages to increase knowledge, improve attitudes and behaviors related to mental health and reduce negative perceptions related to help seeking. Subsequently, baseline data were collected over a 3-month period, using a household survey conducted by trained interviewers.

In the second phase all the screened subject who were found to be suspected were called for clinical assessment by psychiatrist at rural health and training Centre. The date and time scheduled was fixed in consultation with survey team and Medical officers of the primary health centers.

Tool Used for Collecting Common Mental Disorders

Depression was assessed using the Patient Health Questionnaire-9 Item (PHQ9)^[14]. The PHQ9 consists of nine items. Scores of 0, 1, 2, or 3 are assigned to the response categories of 'not at all', 'several days', 'more than half the days' and 'nearly every day' respectively. The total score varies from 0 to 27, with scores of 5–9 indicating mild, 10–14 indicating moderate, and 15–27 indicating severe depression. A cut-off score of ≥ 10 has been recommended as indicating the possibility of clinically relevant moderate depression requiring further assessment. The last item on the PHQ9 specifically relates to ideas of self-harm and is indicative of increased suicide risk.

In the second phase, the community-based health camps were organized at primary health centre to diagnose the common mental disorders by psychiatrist. All the screened participants attending the health camps were taken as case. A team of comprising of one Assistant Professors of Community Medicine, two Senior resident of Psychiatry department, and one Medical officer of rural health training center, one Lady medical officer from rural health and training centre, four interns and one Medical Social Worker were conducted the health camps. The registration was done for all patients, the patient consultation was provided with the free medicine distribution. The participants who were required referrals were referred to the Institution. Participants details, diagnosis and treatment provided by psychiatrist were documented in the questionnaire.

Statistical Analysis

Data were entered and analyzed with SPSS version 16.0 (Chicago, IL, USA). Wherever applicable, proportions and mean (SD) were calculated. Chi-square test was used as a test of significance. The p value of < 0.05 was considered significant.

RESULTS

A total of 319 respondents were interviewed in the study. Percent distributions of sample population by socio-demographic variables were as shown in table no 1 & 2. It shows that most of the respondents (38.2%) were in the young age group (38–57 years) and 2.8% above the age of 78 years. Males constituted 54.9% and females constituted 45.1% of the study population. A majority of the subjects were educated upto primary level (34.8%), majority of respondent were belonged to Hindu religion (72.4%) and almost all were farmer by occupation (93.4%) in the study.

Table no 1: Socio-demographic Characteristics of Study Participants:

Age in years	Frequency n 319	Percent
18--37	89	27.9
38--57	122	38.2
58--77	99	31.0
78 & above	9	2.8
Gender		
Male	175	54.9
Female	144	45.1
Education		

Illiterate	51	16.0
Primary	111	34.8
Middle	75	23.5
Secondary	57	17.9
College&Above	25	7.8
Religion		
Hindu	231	72.4
Muslim	38	11.9
Buddhist	50	15.7
Occupation		
Not Any	10	3.1
Farmer	298	93.4
Housewife	5	1.6
Laborer	6	1.9

In the study sample of 319, majority of the respondents were had habits of tobacco chewing (33.3 %), (68%) were having mixed by diet pattern. Married subjects (90.9%) were higher compared to unmarried (9.1%). 42% were residing in a nuclear family and 48.9% were residing in a joint family. 10.3% were avail the loan. (Table 2)

Table no 2: Socio-demographic Characteristics of Study Participants:

Habits	Frequency	Percent
Tobacco	106	33.2
Smoking	32	10.0
Pan	52	16.3
Alcohol	26	8.2
Combination	30	9.4
Not Any	73	22.9
Diet		
Vegetarian	102	32.0
Mixed	217	68.0
Family		
Nuclear	134	42.0
Joint	156	48.9
Three Generation	29	9.1
Married		
yes	290	90.9
no	29	9.1
Loan		
Yes	33	10.3
No	286	89.7

The overall prevalence of mental disorders was found to be 12.5%. Among the diagnosable group, depression (4.1%) was most prevalent, followed by anxiety disorder (2.2%) and panic disorder (1.6%). Depression with anxiety 0.9%, Attention deficit 0.6%, Mood disorder 0.6%, somatoform disorder 0.6%, adjustment disorder, alcohol dependence, alcohol withdrawal, bipolar disorder, mental retardation and seizure disorder each contribute to 0.3%. (Table 3)

Table no 3: Distribution of Common Mental Disorders in Study Participants

Common mental disorders	Frequency	Percent
Adjustment Disorder	1	0.3
Alcohol Dependence	1	0.3
Alcohol Withdrawal	1	0.3
Anxiety Disorder	7	2.2
Attention Deficit	2	0.6
Bipolar Disorder	1	0.3
Depression	13	4.1
Depression With Anxiety	3	0.9
Mood Disorder	2	0.6
Mental Retardation	1	0.3
Schizophrenia	5	1.6
Seizure Disorder	1	0.3
Somatoform Disorder	2	0.6
Normal	279	87.5
Total	319	100.0

Table No 4 reveals that the association of the socio-demographic factors like age, gender, occupation, habits, family and loan all these factors are associated with common mental disorders, this is found to be statistically significant. ($p < 0.05$)

Table no 4: Association of Socio-demographic Variables with Common Mental Disorders.

Socio-demographic Variables		CMD		Total	P
		Yes n 40	No n 279		
Age	18--37	5	84	89	0.03
	38--57	22	100	122	
	58--77	13	86	99	
	78 & above	0	9	9	
Gender	Male	30	145	175	0.006
	Female	10	134	144	
Marriage	Yes	39	251	290	0.12
	No	1	28	29	
Educational Status	Illiterate	8	43	51	0.35
	Primary	11	100	111	
	Middle	8	67	75	
	Secondary	7	50	57	
	College&Above	6	19	25	
Religion	Hindu	32	199	231	0.14
	Muslim	1	37	38	
	Buddhist	7	43	50	
Occupation	Not Any	3	7	10	0.02
	Farmer	33	265	298	
	Housewife	2	3	5	
	Laborer	2	4	6	
Habits	Tobacco	18	88	106	0.05
	Smoking	5	27	32	
	Pan	10	42	52	
	Alcohol	1	25	26	
	Combination	3	27	30	
	Not Any	3	70	73	
Diet	Vegetarian	17	85	102	0.12
	Mixed	23	194	217	
Family	Nuclear	23	111	134	0.06
	Joint	16	140	156	
	Three Generation	1	28	29	
Loan	No	30	256	286	0.001
	Yes	10	23	33	

DISCUSSION

We found that the prevalence of Common mental disorders as 12.5% and among the diagnosable group, depression (4.1%) was most prevalent, followed by anxiety disorder (2.2%) and panic disorder (1.6%). Depression with anxiety 0.9%, Attention deficit 0.6% Mood disorder 0.6% ,somatoform disorder 0.6%,adjustment disorder, alcohol dependence, alcohol withdrawal,bipolar disorder, mental retardation and seizure disorder each contribute to 0.3%.To our knowledge, this is the first community based study providing information on Common mental disorders from rural area. The strengths of the study were that standardized validated tools were used to assess Common mental disorders. Interviewers were trained and monitored during data collection. Suicidal ideation was captured using the single PHQ9 question, which only provides insight into one's thoughts; this is a risk indicator. Most important the definitive clinical assessments of suspected subjects were done by senior residents from psychiatry department.

In the present study, the socio-demographic factors like age, gender, occupation, habits, family and loan all these factors are associated with common mental disorders. Other study by author Rakshitha R Shenoy et al found that ,the prevalence of CMDs among women was 5.7%, with 4.6% having depression and 3.37% with anxiety disorders^[15] Similar study by author Sudha Kulkarni et al found that Anxiety, depression and suicidal ideation affected 10.8, 14.4 and 3.5% of participants, respectively. Study also found that these were more common among women, and among those who were aged 30–59 years, uneducated, or divorced/ separated/ widowed. Stress due to financial loss was significant.^[16] Study by Firoj Al mamum Mohmahad et al showed that prevalence of depression was 11.2%, and that of anxiety was 12.2%. About 20.4% of the participants had reported suffering from any mental illness^[17] Study by author Pavithra J et al found that The weighted prevalence of current CMDs was 5.1% (95% CI: 5.06–5.13). Prevalence was highest in females, among the 40–59 years of age group.^[18] Study by T. S. Sathyanarayana Rao et al in south India found that 24.40% of the subjects were suffering from one or more diagnosable psychiatric disorder. Prevalence of depressive

disorders was found to be 14.82% and of anxiety disorders was 4%.^[19] Study by Ritesh Upadhyay et al found ,highest percentage of CMD was 26.47%, belonging to 16–25 age group and distress was found in 16.07% and severe distress in 7.80% with SRQ-20 scoring between 7 and 13 and >14, respectively, with higher proportion of females.^[20] Study by author Elmars Rancans from primary care population Latvia found the 37.2% prevalence of mental disorder was 37.2% .While Mood disorders (18.4%), suicidality (18.6%) and anxiety disorders (15.8%) were the most frequent diagnostic mental disorders categories.^[21]

The present study highlights the relatively high prevalence 12.5% of common mental disorder amongst the rural population. This result is rather consistent with other studies carried out in other part of countries.^[22,23,24]

We found that the impact of sociodemographic variables such as age, gender, occupation,habita,type of family and loan have been directly attributed to the causation of CMD. While these findings suggest that future community based studies would be required to address the mental health care need.

CONCLUSION

In the study, the magnitude of the common mental disorder remains high in the rural area. Age, gender, occupation, habit, type of family and loan were significantly associated with common mental disorders. Based on our findings, we would like to recommend there is a need to identify CMD at the earliest at primary care settings. There is an urgent need to train all health workers to identify this illness at grass root level and introduction of coping up strategies for affected population and they should be encouraged. Periodic screening of the affected population and appropriate treatment should be given to prevent the progress and consequences of these disorders. Further research should be undertaken to identify various other factors that influence the common mental disorders.

Conflicts of Interest: There are no conflicts of interest.

Author Contributions: All the authors were involved in the design of the study and tool development. Dr.Vinod Wasnik, Dr.Vidut Khandewale & Dr.V.D.Khanande collected and analyzed the data and prepared the first draft. Dr.A.K.Jawarkar provided critical inputs for the paper and approved the final draft.

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