

# Common psychiatric disorders in rural people epidemiological study at Villupuram District.

**<sup>1</sup>Dr.Balamurugan K. , <sup>2</sup>Dr.Sembiyan R.**

<sup>1</sup> Assistant professor ,Dept of Psychology, St.Joseph'S College of Arts & Science (Autonomous) , Cuddalore, Tamilnadu-607001, Email.ID- bala030688@gmail.com

<sup>2</sup> Assistant professor ,Dept of Psychology, St.Josephs College of Arts & Science (Autonomous) , Cuddalore, Tamilnadu-607001, Email.ID- kavinsimbu@yahoo.com

**Abstract:** Psychiatric disorders are common but many of them are under-recognized and under-treated in the population because of various reasons. But the same time advances with respect to powerful, investigative and potential untried epidemiological studies have been minimal. The objective is to estimate the prevalence of common psychiatric disorder and its association with social-demographic variables. We had conducted a general psychiatric Epidemiological study of door –to door survey in 9 villages, 12 schools and one college of Thiruvannainallur Block with 34,618 populations in Thirukoilur taluk Tamilnadu. The data was collected using MINI 7.0.0, CBCL, IPDE and ICD – 11 diagnoses. We had identified 1902 vulnerabilities of person have been affected and need psychiatric treatment. The overall prevalence of general psychiatric disorder shows mood disorder(26.2%), anxiety disorder(14.7%), personality disorder(15%), childhood disorder(14.5%), neuro developmental disorder(10.1%) adjustment disorder(3.4%) and conversion disorder(1.4%) are significantly higher in female, whereas male are higher in substance abuse(12.3%) and sexual disorder(0.3%) but psychotic disorder(1.6%) were common among psychosis and schizophrenia. The study concluded that most psychiatric disorder are belongs to illiterate, lower socioeconomic status, first born, marital status – single, consanguineous, no children in their family, nuclear family, family history of psychiatric illness and 98% of affected individuals are living with psychiatric disorder.

**Key Words:** Psychiatric Disorders, Anxiety, Depression, Personality.

## 1. INTRODUCTION:

Psychiatric epidemiology is the study of the distribution and determinants of mental illness frequency in human beings, with the fundamental aim of understanding and controlling the occurrence of mental illness. Dr.M.V.Govindaswamy was the first person to consider psychiatric epidemiology in India. He failed to make any significant impact due to methodological errors. The first major survey on psychiatric problems in India was undertaken by Professor K.C.Dube in Agra in 1961<sup>1</sup>.

According to Dr. D. Ram, Director of Central Institute of Psychiatry, 13 per cent of the Indian population suffers from acute mental illness and mental health professionals are not depressingly low in number in India. He added that for the first time a mental health survey was conducted on a large scale in 12 states covering almost 60 per cent Of population to ascertaining the incident of mental illness at national level. The report indicated that 10.6 per cent population from age 18 and above suffered mental illness (Times of India, October 22, 2016). These discrepancies are not specific to Indian studies but are also seen in international studies like the Epidemiological Catchment Area Program and the National Co-morbidity Survey.<sup>2-3</sup> Interesting to note that the prevalence of mental disorders in India is very low compared to the western world<sup>14</sup>.

In India there are very scant epidemiological studies in psychiatry. The last study conducted is about 20 years ago. There are 22 studies in India on general epidemiological studies. The psychiatric epidemiological studies on the Indian map, studies are found to be concentrated only in certain places like West Bengal (40%) and Uttar Pradesh (10%), which leads to difficulty in generalizing the findings<sup>15</sup>. In Indian epidemiological studies, many researchers interviewed only the head of the family or the housewife or any other responsible family member for data collection. This will lead to responder bias and also recall bias. There is a high chance of underreporting of symptoms of minor mental disorders.

This study attempted to address unmet needs and to form a basis for formulating the mental health need of the community. Therefore, this study was conducted to find out the prevalence and correlates of psychiatric cases in the rural community. So we want to study the prevalence of psychiatric disorder in a rural community of Thiruvannainallur Taluk, Thirukoilur district, Tamilnadu.

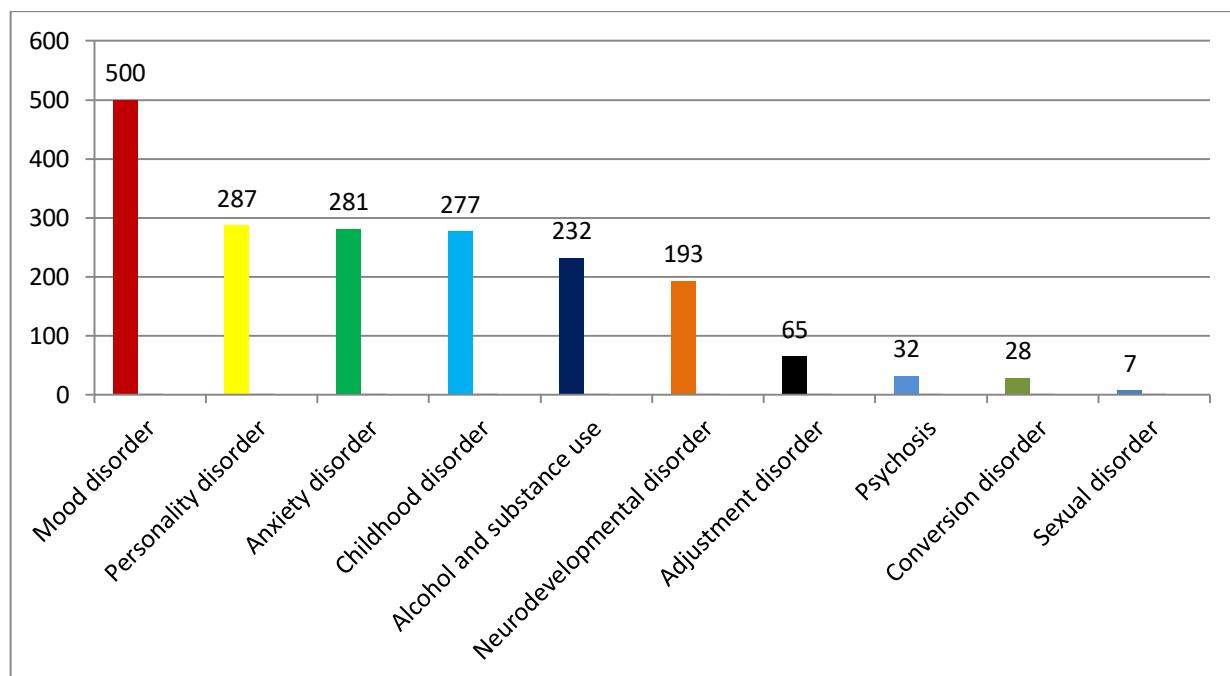
## 2. METHODOLOGY:

There are 1.70 lakhs population of 49 villages in Thiruvannainallur block of Thirukoilur district, in Tamilnadu. Every 4<sup>th</sup> village were randomly assigned and research team headed by the Me & My Psychologist Team. We went to villages for door – to door survey with help of local panchayat clerk, women's self- help group and megaphone all the members of team will give awareness lecture once every 100 ft in vernacular and we knocked the door and asked them politely whether there is any symptoms of anxiety/psychotic/ADS/NDS, old age problems or any other signs and symptoms of psychiatric illness.

When any family members approached consent form, socio demographic data and psychological signs and symptoms of concerned individual were collected separately by trained personal nursing students, social worker, and psychologist then it verified by senior clinical psychologist and professor will make clinical diagnoses on the basis of CBCL, MINI 70.0, IPDE and ICD – 11. The children were not excepted to remain at home. So the children were screened at school. The consent was obtained from parent/class teacher/foster parent as everything about children. In one Government College the permission were obtained from principal all UG and PG students' morbidity were assessed by the team members. The team covered 9 villages, 12 schools(primary, middle, high and higher secondary) and one government college in 10 months from March 2018 to January 2019 in Thiruvannainallur Block villages with 34,618 populations in Thirukoilur district.

### 3. RESULT AND DISCUSSION:

Bar diagram shows overall prevalence of Epidemiological study



#### Substance use disorder

The overall prevalence of alcohol and substance abuse disorder is 15%(n=232). The prevalence of alcohol use disorders is higher among males was 6% (n=116, p value <0.001) for alcohol and nicotine dependence 3.6% (n=68), nicotine 0.10% (n=18), and substance use 0.4% (n=4) whereas female alcohol 0.2% (n=4 p value <0.001), alcohol and nicotine dependence 0.1% (n=3), nicotine 0.6% (n=12), substance use 0.2%, (n=4)<sup>12</sup>. The survey showed that nicotine and other substance used disorder starts at the age of 17yrs whereas alcohol started at 19yrs, alcohol co-morbidity started at 25yrs and alcohol with delusion of infidelity started at 35yrs. The prevalence of alcohol with co morbidity 5.1%(n=98), and substance use disorder higher in among 35 to 55yrs is 0.4%(n=8 p value <0.001), illiterate have more alcohol and substance abuse 4.7%(n=90 p value <0.001), the coolie wages 8.9%(n=171 p value <0.001), common among married 10.1%(n=193 p value <0.001), most of having one to two children 4.5%(n=87), parents marriage are consanguineous 10.6%(n=203 p value <0.001) the presence of psychiatric illness 10.9%(n=209), middle born 4.7%(n=90 p value <0.001). But there was no significant level for present and absence of history of addiction treatment<sup>29</sup>.

But the prevalence rate is very low when comparing to Tamilnadu and national level of studies. Even though the awareness about psychiatric illness has increased in the two study project of tamilnadu, the awareness is much lesser many people hiding the facts of alcoholics are protected by the wife's and children, as they feel that the family might be branded. The officials 75% men, 10% women are alcoholic and NDS is 80% male and 20% of female. But people are reluctant to reveal. So the figures percentage of alcohol and substance addiction should be twice the number shown in the figures.

## Anxiety disorder

The overall prevalence of anxiety disorder is 15%(n=281 p value <0.001)<sup>25</sup>. The female is higher 9.8% (n=188 p value <0.001)<sup>26</sup>, Generalized anxiety disorder 6.2%(n=118)<sup>27</sup>, mixed anxiety depression 1.5%(n=30), obsessive compulsive disorder 0.4%(n=9), PTSD<sup>25</sup> social phobia 1.0%(n=20) and specific phobia 0.1%(n=2). The prevalence rate higher among GAD below 18yrs 4.7%(n=90), mixed anxiety depression for above 19yrs 1.7%(n=33), OCD 0.5%(n=11), PTSD 0.5%(n=10), panic disorder 0.05%(n=1) whereas social phobia is higher among below 18yrs 0.9%(n=19) but specific phobia is common among 0.05%(n=1)<sup>21</sup>. The GAD is higher among graduates 4.5%(n=86 p value <0.001), mixed anxiety depression disorder 0.2%(n=5), social phobia 1.5%(n=29) and specific phobia 0.1%(n=2) The survey also indicates that mental disorders including anxiety disorders affect the productive age group between 30 and 49 the most and peaks during this time.

The GAD is higher among daily wages 9.2%(n=176), mixed anxiety depression 1.9%(n=38 p value <0.001), OCD 0.7%(n= 15 p value <0.001), whereas panic and obsessive-compulsive disorders are relatively rare (i.e., below 1%).(3) PTSD 0.5%(n=10), social phobia 1.9%(n=37) and specific phobia 0.1%(n=2). In marital status the single is higher in GAD 7.1%(n=136 p value <0.001), OCD 0.6%(n=13), social phobia 1.9%(n=37 p value <0.001) whereas married are higher in mixed anxiety depression 1.3%(n=26) and PTSD 0.4%(n=8). The birth order shows first born is higher in GAD 3.4%(n=66), OCD 0.2%(n=5), social phobia 0.7%(n=15) whereas middle born are higher in mixed anxiety depression 0.9%(n=18) and PTSD 0.3%(n=6). Anxiety related disorders are higher among consanguineous child 11.5% (n=219 p value <0.001), no children in their families 10.7% (n=204 p value <0.001) and family history of psychiatric illness 7.5% (n=144 p value <0.001) and number of person in the family 7.6% (n=146 p value <0.001) but no significant differences past history of psychiatric illness.

The overall prevalence of conversion disorder 1.4% (n=28 p value <0.001) in the community sample. The female shows higher 1.5% (n=20 p value <0.001), school children 1.15% (n=22 p value <0.001), middle born 0.6 p value <0.001%(n=13 p value <0.001), marital status- single 0.9% (n=18 p value <0.001), consanguineous child 11% (n=21), family history of psychiatric illness 0.8% (n=16 p value <0.001), number of person in family 0.8% (n=16 p value <0.001) and past history of treatment 1.1% (n=22 p value <0.001)<sup>12</sup>. The study shows anxiety disorder 15% is higher than National Mental Health Survey conducted by the NIMHANS in 2015 -2016, indicates that the total prevalence of anxiety disorders in India amount to 3.1 percent of the population.

## Adjustment disorder

The overall prevalence of adjustment disorder is 2.3% (n=45 p value <0.001). The present study shown that higher in adjustment disorder 1.7% (n=34 p value <0.001), grief reaction 0.4% (n=9 p value <0.001), suicide 0.05% (n=1 p value <0.001) whereas stammering is higher in male of 0.2% (n=5 p value <0.001). The adjustment is higher for above 19yrs 1.3 % (n=25 p value <0.001) grief reaction 0.5% (n=11 p value <0.001) and below 18yrs are in stammering 0.3% (n=6 p value <0.001) and suicide 0.05% (n=1 p value <0.001). The adjustment disorder is higher among college students 1.4 % (n=28 p value <0.001), whereas grief reaction higher among schools students 4% (n=8 p value <0.001), and suicide 0.05% (n=1 p value <0.001).

The marital status shown that unmarried had higher in adjustment disorder 1.8% (n=35 p value <0.001) stammering 0.4% (n=8 p value <0.001) and suicide 0.05% (n=1 p value <0.001) whereas married shown higher in grief reaction 0.3% (n=6 p value <0.001). The birth order shows that first born is higher for adjustment disorder 1.2% (n=24 p value <0.001), stammering 0.2% (n=4 p value <0.001), grief reaction 0.2% (n=5 p value <0.001) and suicide 0.05% (n=1 p value <0.001). The parent marriage are consanguineous shown higher in adjustment disorders grief reaction, stammering and suicide 2.7% (n=52 p value <0.001), the parents without child have shown higher in adjustment disorder, grief reaction, stammering and suicide 2.5% (n=49 p value <0.001), and number person in the family shows higher in adjustment disorder, stammering, grief reaction and suicide 1.9% (n=37 p value <0.001)<sup>12</sup>. About suicide people do not reveal the fact, but the panchayat clerk and women self's help – group told that one or two case of suicide in one year. Even though there is gross agricultural failure, no incidence of suicide in this ground.

## Mood disorder

In the community sample the mood disorder occupies 1/4<sup>th</sup> population. The prevalence rates of depression from India range from 1.5/1000 to 37.74/1000<sup>13</sup>. The overall prevalence of mood disorder is 26.6% (n=500 p value <0.001). WHO states that the burden of depression is 50% higher for females than males and Indians are reported to be among the world's most depressed<sup>28</sup>. The women shown higher in depression 10.6%(n=202 p value <0.001) and dysthymia 8%(n=154 p value <0.001) whereas male shown higher in BPAD – I is 0.7%(n=15 p value <0.001) and BPAD – II is 0.1%(n=3 p value <0.001)<sup>12</sup>. The young children and adolescent shown higher prevalence in depression 5.8% (n=112 p value <0.001) and dysthymia 4.4% (n=85 p value <0.001), whereas 20yrs to 35yrs show higher in BPAD – I is 0.6% (n=12 p value <0.001) and BPAD – II is 0.1% (n=2 p value <0.001)<sup>22</sup>.

In education group high and higher secondary school students shown higher depression 6.3% (n=121 p value <0.001), college students are higher in dysthymia 4.6% (n=89 p value <0.001) and BPAD – II is 0.1% (n=2 p value <0.001) but illiterate are higher in BPAD – I is 0.5% (n=10 p value <0.001)<sup>12</sup>. In marital status the unmarried shown higher in depression 6.7% (n=128 p value <0.001), dysthymia 4.9% (n=95 p value <0.001) whereas married shows higher in BPAD – I is 0.8% (n=17 p value <0.001 and BPAD – II is 0.1% (n=3 p value <0.001). The birth order shows first born is higher for depression 4.8% (n=92 p value <0.001), dysthymia 4.3% (n=82 p value <0.001), BPAD – I is 0.7% (n=14 p value <0.001) and BPAD – II is 0.1% (n=3 p value <0.001). The consanguineous individual shows higher in depression 10.3% (n=197 p value <0.001), dysthymia 8.6% (n=164 p value <0.001), BPAD – I is 1.1% (n=22 p value <0.001) and BPAD – II is 0.2% (n=5 p value <0.001). The mood disorder is high family without child in depression 7.5% (n=143 p value <0.001), dysthymia 5.5% (n=106 p value <0.001) and family with one or two children are higher in BPAD – I is 0.5% (n=11 p value <0.001), BPAD – II is 0.1% (n=3 p value <0.001). The presence of depression, dysthymia, BPAD – I and II are higher among presence of psychiatric illness 13.7% (n=262 p value <0.001) and presence of past history of psychiatric illness 25% (n=492 p value <0.001).

### **Psychosis**

The overall prevalence of psychosis and schizophrenia is 0.8% (n=16 p value <0.001). The study shows psychosis started at 22yrs. The psychosis and schizophrenia are higher among 27 to 57yrs 0.4% (n=9 p value <0.001), female 0.57% (n=11), illiterate 0.6% (n=12 p value <0.001), home maker 0.6% (n=12 p value <0.001), married 0.6% (n=12 p value <0.001), middle order of birth 0.4% (n=9 p value <0.001), consanguineous family 1.3% (n=25 p value <0.001), married person living with two children 0.3% (n=7 p value <0.001), presence of family history of psychiatric illness 0.8% (n=16 p value <0.001) and absence of past treatment history 1.4% (n=28 p value <0.001), the psychosis is higher among more number of person in their family 0.5% (n=10 p value <0.001)<sup>12</sup>.

India found that one-third of people with schizophrenia had never accessed any treatment resources<sup>7</sup>. Even after the diseased individuals and their families were offered treatment, a third of them remained untreated<sup>8</sup> The overall prevalence of dementia is 0.8% (n=16 p value <0.001) very lower compared to geriatric population, aged 60 years and above, forms nearly 7.5% of the total population of India<sup>16</sup>.

### **Childhood and Neurodevelopmental disorder**

The overall prevalence of childhood disorder is 14.7% (n= 277 p value <0.001) are female 7.5% (n= 144) and male 6.9% (n=133)<sup>17</sup>. The female are higher in moderate ID(Intellectual Disabilities) 0.8% (n=17 p value <0.001), mild ID 2.5% (n=48 p value <0.001), learning disabilities 2.1% (n=41 p value <0.001) whereas male are higher in behavioral problem 1.4% (n=27 p value <0.001), conduct disorder 0.4% (n=8 p value <0.001) and slow learner 0.6% (n=12 p value <0.001). The overall prevalence of Neuro – developmental disorder is 10.2% (n=193 p value <0.001). The prevalence of cerebral palsy 0.1% (n=3 p value <0.001), severe Intellectual disabilities 0.4% (n=8 p value <0.001), borderline intelligence 0.9% (n=19 p value <0.001) and slow learner 0.6% (n=12 p value <0.001) are higher in male. The female shows higher in profound intellectual disabilities 0.1% (n=1 p value <0.001) moderate intellectual disabilities 0.8% (n=17 p value <0.001) and mild intellectual disabilities 2.8% (n=54 p value <0.001)<sup>20-21</sup>.

The disorder shows higher in below 18yrs age in profound intellectual disabilities 0.1% (n= 1 p value <0.001), moderate intellectual disabilities 0.07% (n=14 p value <0.001), mild intellectual disabilities 2.4% (n=47 p value <0.001), borderline intelligence 1.6% (n=32 p value <0.001) slow learner 1% (n=20 p value <0.001) whereas above 18yrs are higher in cerebral palsy 0.1% (n= 1 p value <0.001) and common in severe intellectual disabilities 0.3% (n=7 p value <0.001). Children and adolescents are at high risk of developing mental disorders. Early studies reported prevalence rates of psychiatric disorders among children ranging from 13 to 94 per 1000.<sup>4-6</sup>

The educational status show illiterate are higher in cerebral palsy 0.1% (n=3 p value <0.001),, moderate intellectual disabilities 0.6% (n=12 p value <0.001), profound intellectual disabilities 0.1% (n=3 p value <0.001), severe intellectual disabilities 0.3% (n=6 p value <0.001) whereas mild intellectual disabilities 3.2% (n=61 p value <0.001), borderline intelligence 1.4% (n=28 p value <0.001) and slow learner 0.9% (n=19 p value <0.001) in secondary education. The marital status shows that most person 9.1% (n=174 p value <0.001) are remain as unmarried. The birth order shows first born are higher in cerebral palsy 0.1% (n= 2 p value <0.001) and moderate intellectual disabilities 0.6% (n=13 p value <0.001) whereas middle born are higher in severe intellectual disabilities 0.3% (n=6 p value <0.001), mild intellectual disabilities 1.8% (n=35 p value <0.001), borderline intelligence 0.6% (n=13 p value <0.001) and slow learner 0.4% (n=9 p value <0.001) and last born are higher in profound intellectual disabilities 0.1% (n= 1 p value <0.001).

The affected person of parents are consanguineous are higher in cerebral palsy 0.1% (n=3 p value <0.001), profound intellectual disabilities 0.1% (n= 1 p value <0.001), severe intellectual disabilities 0.3% (n=7 p value <0.001), moderate intellectual disabilities 0.8% (n=17 p value <0.001), mild intellectual disabilities 2.5% (n= 49 p value <0.001), borderline intelligence 1.4% (n=28 p value <0.001) and slow learner 0.8% (n=16 p value <0.001). The presence of

psychiatric illness are higher in sever intellectual disabilities 0.5% (n=10 p value <0.001), mild intellectual disabilities 2.8% (n= 55 p value <0.001), borderline intelligence 0.9% (n=19 p value <0.001) whereas absence of psychiatric illness are higher in cerebral palsy 0.1% (n= 2 p value <0.001) and slow learner 0.6% (n=13 p value <0.001).

### **Sexual disorder**

The overall prevalence of sexual disorder is 0.3% (n=7 p value <0.001). The present study pertaining to Dhat's syndrome showed 0.2% (n=5 p value <0.001) in 17 to 21yrs, single, lower socioeconomic status middle born 0.05% (n=1 p value <0.001)<sup>10-11</sup>, The dhat's syndrome, GID does not significant at family history of psychiatric illness, number of person in the family<sup>18,19,23,24</sup>. The study documented 0.1% (n=2 p value <0.001) of Gender – Identity Disorder(GID) from student, lower socio – economic status, middle born, consanguineous parents and living with parents.

Sexual disorder in men and women is complex as it interacts with cultural, religious and legal issues and remains a source of embarrassment for many patients. The sensitive nature of complaints and cultural taboos also affects health professionals, for detailed assessment. In recent period, India has also witnessed a scuttle in awareness, public and media activism in GID. However, there is scarcity of scientific data from India on GID.

### **Personality disorder**

The Present study showed the overall prevalence of personality disorder was found to be 15.3%. The women showed overall higher 8.9% in personality disorder. The study showed anxious avoidant personality disorder 10.6%<sup>9</sup>. The male shows higher in antisocial personality disorder 1.15% women is higher in anxious avoidant personality disorder 5.10%(n=114), borderline personality disorder 0.2%(n=5), emotionally unstable personality 0.3%(n=6), histrionic personality disorder 1.4%(n=28) and impulsive personality disorder 0.5%(n=11).

The ratio may increase because the caregiver was not willing to come forward to disclosure or allow the team members for detailed assessment. We were not get detailed about paranoid personality disorder, schizoid personality disorder, obsessive compulsive personality disorder and dependent personality disorder in the community sample.

### **Conclusion**

Mental health problems constitute a wide spectrum ranging from sub-clinical states to very severe forms of disorders. The psychosis and ID is significantly seen in these populations so the reason for not coming for treatment taboo, stigma branding and poor financial status as the village has lower socioeconomic status and middle socioeconomic status. Major problem in village are 30% of house are locked as they are migrant to city. 30% of houses children between 8yrs to 12yrs are managing the household apart from going to school and take care of their younger siblings.

The nicotine dependence and alcohol dependence are common but we could overtly seen cannabis or other drug dependence is not existence. Increase in invisible mental health problems such as suicidal attempts, aggression and violence, widespread use of tobacco, alcohol and other drugs, increasing marital discord and divorce rates emphasize the need to prioritize and make a paradigm shift in the strategies to promote and provide appropriate mental health services.

### **4. LIMITATION OF THE STUDY:**

- People with addiction and their caregiver are elected to come forward for fear of branding and stigma.
- We were not get detailed about PTSD, suicide, marital disharmony and sexual dysfunction.
- Major problems in villages are 30% of houses are locked as they are migrant to city.

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