

ORIGINAL ARTICLE

Suttur study: An epidemiological study of psychiatric disorders in south Indian rural population

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ABSTRACT

Background: Based on review of literature World Health Organization (WHO) Global Burden of Disease Study has estimated that psychiatric disorders are among the most burdensome, around the globe and has suggested general population surveys for future research. This study aims to estimate the prevalence of psychiatric disorders and study their association with various socioeconomic variables.

Materials and Methods: This was an exploratory study where a door-to-door survey of the entire population residing in a South Indian village was done ($n = 3033$). Mini international neuropsychiatric interview kid (MINI) or MINI plus were administered to all the subjects according to the age group.

Results: It was 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%. Alcohol dependence syndrome was diagnosed in 3.95% of the population. Prevalence of dementia in subjects above 60 years was found to be 10%.

Conclusion: Our study is among the very few epidemiological studies with respect to methodological design which does not use screening questionnaires and evaluates each subject with detailed administration of MINI. It concluded that one among four were suffering from a psychiatric disorder. Improving the training of undergraduate medical and nursing students is likely to play a significant role in addressing the increasing psychiatric morbidities.

Key words: Prevalence of psychiatric disorders, India, age, alcohol consumption and depression, epidemiology and epidemiological study, chronic medical disorders

INTRODUCTION

The World Health Organization (WHO) Global Burden of Disease Study has estimated that psychiatric disorders are among the 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 are the need of the hour.^[1-3] They have an impact on both the economic aspects and quality-of-life of the people.^[1-3] The sociodemographic 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.

Epidemiological studies are quintessential as they provide crucial information on prevalence of disorders that aids in making public healthcare policies regarding prevention and treatment. Contrast to the need, only a few epidemiological studies on mental and behavioral disorders have been published from India. Hence, this study was conducted to

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broaden our knowledge regarding prevalence of psychiatric disorders in the rural population, which constitutes 63.7% of the total population in India.^[4] The study aims to estimate the prevalence of psychiatric disorders in the selected area and study the association of each psychiatric disorder with various socioeconomic variables and physical health profile of individuals.

MATERIALS AND METHODS

Study area: A door-to-door interview of the entire population residing in a south Indian village, Suttur (about 20 km from Mysore city in Karnataka) was conducted. Suttur has a population of approximately 4100 (around 1000 families) with predominant Hindu community. The idea was to assess prevalence of psychiatric disorders in this village (which has an accessible and a good health care facility provided by J.S.S. Mahavidyapeeta; Suttur being a model village, demographic and health registry details of the population are accurately available). Hence prevalence of psychiatric disorders in most other villages in India (without such accessible health services) would be similar.

Study: An exploratory, door to door epidemiological study was undertaken. For the purpose of the study, a team was constituted, which included a psychiatrist, psychiatry resident, three trained social workers, one data entry operator and 2 primary health center staff. Social workers, data entry operator and primary health center staff of Suttur were trained for 2 months on the topic and methodology (related to the present study). Home visits were made between 8 am and 7 pm (to interview subjects before they leave or after they come back from school/college/work; remaining subjects, including housewives were interviewed in the afternoon). The entire team visited each and every house. A formal introduction of the individuals in the team and objectives of the study were given. A general examination (included: weight, height, pallor: present/absent, and blood pressure) was done and the individuals were educated in brief regarding: importance of diet, daily exercise, prevention of obesity and were referred to a physician as and when required. A total of 3033 subjects of all age groups who gave informed consent were included in the study. For subjects <18 years, informed consent was taken from their parents. After obtaining the informed consent, the subject was interviewed in a place where he/she felt comfortable. Privacy and anonymity were ensured. About 900 individuals enrolled as staying in the study area could not be involved in the study as they had moved out of the place, but were figured in the registry. About 100 subjects did not consent to take part in the study.

Sociodemographic data were collected as per the prepared standard questionnaire. Screening questionnaires were not used to avoid false negative results. All the subjects were administered mini international

neuropsychiatric interview (MINI), MINI Kid was applied for subjects <18 years and MINI Plus was applied for subjects above 18 years. Structured questionnaire was used to assess for dementia and mental retardation based on International Classification of Diseases and Related Health Problems 10th edition (ICD-10)^[4] and Diagnostic and Statistical Manual of Mental Disorders 4th edition Text Revision (DSM-IV TR)^[5] as these two diagnoses are not included in MINI interview schedule. The diagnosis of a neuropsychiatric disorder was cross verified and confirmed by the psychiatrist based on DSM-IV^[5] TR and ICD-10^[4] diagnostic criteria. The tools used were (1) Sociodemographic data proforma; (2) Socioeconomic status assessment based on modified B. G. Prasad's Classification;^[6] (3) MINI PLUS (Mini — International Psychiatric Interview);^[7-9] (4) MINI KID (Mini — International Psychiatric Interview for Children and Adolescents);^[10] (5) Structured interview schedule to diagnose dementia based on DSM-IV TR and ICD-10 criteria; (6) Structured interview schedule to diagnose mental retardation based on DSM-IV TR and ICD-10 criteria. Both descriptive and inferential statistics were employed. Contingency coefficient tests were applied to study the association using SPSS for windows (version 16.0).

RESULTS

General characteristics of the study population

In the study sample of 3033, majority were between 18 and 25 years (17.10%) vs those between 31 and 40 years (16.20%). Gender distribution was found almost to be equal, and married subjects (62%) were higher compared to unmarried (38%). 55.1% were literate and 25.2% students; 60.5% were residing in a nuclear family Vs 30.1% who were residing in a joint family; only 0.4% of the subjects were residing alone. Majority of the study subjects were from lower middle class (43.2%) and 32.5% from upper lower class (as per modified B. G. Prasad's classification). Diabetes mellitus (2.4%) and hypertension (2.2%) were the most prevalent chronic general medical disorders; 6.90% consumed alcohol. Except for the distribution of the study population by gender, *P* value was significant for all other variables mentioned above.

Prevalence of psychiatric disorders among (*n* = 3033) South Indian rural population

In the study population 24.40% of the subjects were suffering from one or more diagnosable psychiatric disorder [Table 1]. Among those having a psychiatric disorder, 82.57% were suffering from a single diagnosable psychiatric disorder, while 17.43% had associated comorbid psychiatric or neuropsychiatric disorders [Table 2].

Depressive disorders (diagnosed using MINI) included major depressive disorder, major depressive disorder with melancholic features, recurrent depressive disorder, substance-induced depression, dysthymia, which together showed a prevalence of 14.82% (148/1000 population).

Table 1: Prevalence of a diagnosable psychiatric disorder in the study population (n=3033)

Subjects with psychiatric disorder	Frequency	Percentage
Subjects with no diagnosable psychiatric disorder	2293	75.60
Subjects with a diagnosable psychiatric disorder	740	24.40
Total population screened	3033	100

Table 2: Prevalence of psychiatric disorders in the study population (n=3033) according to type

Prevalence of psychiatric disorders among 3033 South Indian rural subjects	Percentage
Major depressive disorder	6.62
Major depressive disorder with melancholia	2.24
Recurrent depressive disorder	4.64
Substance induced depression	0.1
Dysthymia	1.22
Bipolar type 1	0.52
Bipolar type 2	0.33
Social phobia	0.16
Alcohol dependence	3.95
Alcohol abuse	0.46
Nicotine dependence	2.7
Schizoaffective disorder	0.03
Generalized anxiety disorder	1.91
Somatization disorder	0.52
Somatoform pain disorder	0.1
Conduct disorder	0.3
Attention deficit hyperactivity disorder	0.1
Oppositional defiant disorder	0.06
Mixed anxiety and depression	1.97
Epilepsy	0.23
Mental retardation	0.33
Dementia	0.90

Anxiety disorders (prevalence-4%; 40/1000 population) included generalized anxiety disorder, social phobia, mixed anxiety and depression. Depression and anxiety disorders formed almost two-thirds (64.16%) of the diagnosed psychiatric disorders. Prevalence of dementia was 0.9% (based on ICD-10 and DSM-IV TR criteria), taking into consideration population of all age groups. The prevalence of dementia in individuals above 60 years was found to be 10%. Prevalence was calculated considering both primary and secondary diagnoses together, whereas association between psychiatric disorders and socio-demographic variables were statistically studied considering only the primary diagnosis.

More than 50% of the population above 41 years was found to be suffering from a psychiatric disorder. Appendix 1 shows the detailed distribution of psychiatric disorders among various age groups. Depression and anxiety disorders were more prevalent among females; substance abuse/dependence were more prevalent among males. Married population had almost a three-fold higher prevalence of psychiatric disorders. This finding has to be interpreted keeping in mind the fact that, the unmarried population mainly considered children and adults below 25

years of age. Illiterates had higher prevalence of psychiatric disorders compared to those educated (upto under-graduation/graduation). Analysis of psychiatric disorders based on occupation showed that the unemployed and daily wage workers had the highest prevalence of psychiatric disorders compared to those who had a salaried occupation or did business. Analysis of family structure showed that, those living alone had the highest prevalence of psychiatric disorders, followed by those living in nuclear family, and the least number of psychiatric disorders were observed in those living in a joint family. Psychiatric disorders were more prevalent in the upper class and lower class compared to the middle socioeconomic class. Depression was almost equally prevalent among all socioeconomic groups. Appendix 2 describes the detailed distribution of major psychiatric disorders among various socioeconomic groups. Subjects having chronic medical illness had 2-3 times higher prevalence of psychiatric disorders compared to the subjects who did not have any chronic medical illness. Table 3 describes the detailed distribution of each psychiatric disorder in various chronic medical disorders. More than 85% of the subjects who consumed alcohol had a diagnosable psychiatric disorder, of which about 47% received Alcohol dependence syndrome diagnosis [Table 4]. Table 5 gives an overview of prevalence of psychiatric disorders based on the sociodemographic groups and physical health profile of individuals.

DISCUSSION

Our study found that 24.40% of the subjects were suffering from a diagnosable psychiatric disorder. An epidemiological study by Dube^[11] in 1970 has reported prevalence of psychiatric disorders to be 1.82% (18.24/1000 population). Sethi *et al.*^[12] conducted a study in a rural population in 1972 and reported prevalence of psychiatric disorders to be 3.9% (39/1000). Shah *et al.*^[13] conducted a study in Ahmedabad in late 1970s, on a population of 2712 and showed the prevalence of psychiatric disorders to be 4.7%; he suggested more than two-fold rise in psychiatric disorders within the same decade. Another study by Premarajan *et al.*^[14] in 1993 reported a prevalence of 9.94% (99.4/1000). A trend of continuous increase in the prevalence of psychiatric disorders with time can be noted by the above study findings. Substantiating the above observation Murray and Lopez^[15] from their study in 1996 found mental and behavioral disorders to be increasing in the population and even World Health Organization has published similar reports of increase in incidence of psychiatric disorders with time.^[16] Our report of higher prevalence rates compared with other Indian epidemiological studies, can be due to few other reasons apart from being a reflection of constantly increasing psychiatric disorders since 1970s. Other factors contributing to our findings may be the door-to-door survey of the entire village population instead of random sampling; no screening questionnaires were used,

Table 3: Distribution of psychiatric disorders based on chronic medical disorders

	No chronic medical illness %	Diabetes %	Hypertension %	COPD %	Cataract %	Asthma %	Migraine %	Chronic kidney disease %
Diagnosable psychiatric disorder present	21.60	61.10	63.20	68.40	60.00	35.70	58.30	100.00
Major depressive disorder	5.50	9.70	13.20	10.50	5.00	7.10	0.00	0.00
Major depressive disorder with melancholia	1.80	4.20	4.40	15.80	5.00	0.00	0.00	0.00
Recurrent depressive disorder	3.40	15.30	20.60	0.00	30.00	0.00	33.30	0.00
Substance induced depression	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dysthymia	0.90	11.10	1.50	0.00	0.00	0.00	16.70	0.00
Bipolar type 1	0.50	1.40	0.00	10.50	0.00	0.00	0.00	0.00
Bipolar type 2	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Social phobia	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alcohol dependence disorder	2.80	4.20	13.20	15.80	0.00	0.00	0.00	0.00
Alcohol abuse	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nicotine dependence	0.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00
Schizoaffective disorder	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generalized anxiety disorder	1.70	1.40	5.90	0.00	10.00	7.10	0.00	100.00
Somatization disorder	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somatoform pain disorder	0.10	1.40	0.00	0.00	0.00	0.00	0.00	0.00
Conduct disorder	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Attention deficit hyperactivity disorder	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oppositional defiant disorder	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mixed anxiety and depression	1.80	4.20	0.00	15.80	0.00	7.10	8.30	0.00
Epilepsy	0.10	4.20	0.00	0.00	0.00	0.00	0.00	0.00
Mental retardation	0.30	0.00	0.00	0.00	0.00	7.10	0.00	0.00
Dementia	0.70	2.80	4.40	0.00	10.00	7.10	0.00	0.00

P=0.000. COPD – Chronic obstructive pulmonary disease

Table 4: Distribution of psychiatric disorders based on alcohol consumption

	Does not consume alcohol %	Consumes alcohol %
Diagnosable psychiatric disorder present	21.10	86.50
Major depressive disorder	5.70	10.50
Major depressive disorder with melancholia	2.10	2.00
Recurrent depressive disorder	4.50	6.00
Substance induced depression	0.00	1.00
Dysthymia	1.30	1.00
Bipolar type 1	0.30	4.50
Bipolar type 2	0.20	2.00
Social phobia	0.20	0.00
Alcohol dependence disorder	0.00	47.0
Alcohol abuse	0.00	2.50
Nicotine dependence	0.20	3.00
Schizoaffective disorder	0.00	0.00
Generalized anxiety disorder	1.80	4.50
Somatization disorder	0.50	0.00
Somatoform pain disorder	0.00	1.50
Conduct disorder	0.30	0.00
Attention deficit hyperactivity disorder	0.10	0.00
Oppositional defiant disorder	0.10	0.00
Mixed anxiety and depression	2.20	1.00
Epilepsy	0.30	0.00
Mental retardation	0.40	0.00
Dementia	1.00	0.00

P=0.000

which avoided false negative findings, detailed evaluation using MINI, adequate importance given to establishing rapport and training of staff associated with the study could be other reasons for the current study findings. Although our findings of psychiatric prevalence rates are much higher in comparison to previous Indian studies, it

is in accordance with the western epidemiological study findings.^[17-19]

Many studies have estimated the prevalence of depression in community samples and the prevalence rates have varied from 1.7 to 74/1000 population.^[11-13,20-23] A large population-based study from South India, which screened more than 24,000 subjects in Chennai using Patient Health Questionnaire-12 reported overall prevalence of depression to be 15.1% (151/1000 population).^[24] Nandi *et al.*^[25] compared the prevalence of depression in the same catchment area after a period of 20 years (first in 1972 and then in 1992) and reported that the prevalence of depression increased from 49.93 cases/1000 population to 73.97 cases/1000 population. The above study findings by Nandi *et al.*^[25] can help understand our study findings of 148/1000 population in year 2012 from 74/1000 population in 1992.

A meta-analysis of 15 epidemiological studies (on psychiatric disorders), by Ganguli^[20] in India, found the prevalence rate of anxiety neurosis to be 16.5 (16.5/1000 population). Similar findings were reported in a meta-analysis by Reddy and Chandrashekhar.^[22] Madhav conducted analysis of 10 Indian studies on psychiatric morbidity and concluded prevalence rates for anxiety neurosis and hysteria to be 18.5 and 4.1/1000 population respectively.^[26] Except for hysteria, the prevalence rates of various anxiety disorders included in the anxiety disorder spectrum were not separately assessed in most of these studies.^[27]

In our study, prevalence of dementia was found to be 0.9%

Table 5: An overview of prevalence of psychiatric disorders based on sociodemographic and physical health profile

Socio-demographic groups/ Physical health profile	Percentage
Based on age (years)	
<5	0.00
6-10	5.70
11-17	6.70
18-25	16.20
26-30	18.10
31-40	28.00
41-50	39.90
51-60	47.00
61-65	50.50
66-75	58.90
>75	44.90
Based on gender	
Male	23.80
Female	25.00
Based on marital status	
Married	33.30
Unmarried	13.00
Based on education	
Illiterate	41.10
Primary education	15.40
High school education	12.50
Under graduation/graduation	9.90
Based on family structure	
Nuclear family	24.70
Joint family	23.90
Living alone	33.30
Based on occupation	
Student	7.40
Daily wage labor	40.30
Homemaker	34.00
Agriculture	27.30
Salaried/business	14.40
Unemployed	53.30
Based on socioeconomic group	
Upper class	35.20
Upper middle class	16.50
Lower middle class	21.00
Upper lower class	31.90
Lower class	33.30
Based on chronic medical disorders	
No chronic medical illness	21.60
Diabetes mellitus	61.10
Hypertension	63.20
COPD	68.40
Cataract	60.00
Asthma	35.70
Migraine	58.30
Chronic kidney disease	100.00
Heart diseases	0.00
Based on alcohol consumption	
Does not consume alcohol	21.10
Consumes alcohol	86.50

COPD – Chronic obstructive pulmonary disease

based on ICD-10 and DSM-IV TR criteria. This prevalence rate was on taking into consideration population of all age groups but as dementia is mostly seen in age groups of above 60 years, so 0.9% will not be a due representation of the prevalence of dementia. On considering population

of above 60 years, prevalence of dementia was found to be 10% in our study population. A detailed review of the studies on dementia by Prince MJ reported that prevalence of dementia in the community varies between 0.9% and 7.5% among the people above 65 years.^[28] 10/66 dementia studies reported prevalence rates of dementia to vary between 5.6% and 11.7%.^[29]

Our study finding that psychiatric disorders increase with increasing age and more than 50% of the population above 40 years suffer from a diagnosable psychiatric disorder is in accordance with the findings of the other studies. Increased psychiatric morbidity with advancing age has been reported by many studies.^[12,13,30-33] Changes in lifestyle (leading to increased stress; social factors) and psychological factors combined with genetic predisposition (biological factors) have lead to increase in psychiatric morbidity with increasing age.

Based on gender, depression and anxiety disorders were more prevalent among females, substance abuse/dependence were more prevalent among males. Sethi *et al.*^[12] and Nandi *et al.*^[34] have also reported a higher psychiatric morbidity particularly of neurosis and depression among females. Hagnell^[35] findings were similar to our study; that depression and anxiety disorders are more prevalent among females than males. Gender specific risk factors for psychiatric disorders that disproportionately affect women are gender-based violence, pregnancy and menopause, socioeconomic disadvantage, low income and income inequality, low or subordinate social status and rank, and unremitting responsibility for the care of others. Studies have shown that there is a positive relationship between the frequency and severity of above mentioned social factors and prevalence of mental health problems in women.^[36-40]

Analysis of family structure showed that those living alone had the highest prevalence of psychiatric disorders followed by those living in nuclear family and the least number of psychiatric disorders were observed in those living in joint family. Leff *et al.*^[41] suggested that traditional joint families allow for diffusion of burden and could be responsible for mediating a positive outcome regarding mental health disorders. Many studies carried out on the role of the family structure in relation to mental health have found that the nuclear family structure is more likely to be associated with psychiatric disorders than the joint family structure.^[42-44]

In our study, psychiatric disorders were more prevalent in upper class and lower class compared with middle socioeconomic class. A study done in Ahmedabad concluded that the extreme poles of socioeconomic scale, that is, lower class families and upper class families are more susceptible to psychiatric disorders, possibly because these families are more exposed to stressful living.^[13] Contrary to the

above findings, there are a few studies, which did not find any positive relationship between social class and mental illness.^[45,46] Thacore found higher morbidity in middle and upper social class.^[47] Hollingshead and Redlich in the New Haven study found that higher the social class, higher the neuroses and lower the social class, higher the psychoses.^[48] Subjects having chronic medical illness in our study had 2-3 times higher prevalence of psychiatric disorders compared to the subjects who did not have any chronic medical illness. Many studies have found similar findings that chronic medical illnesses are associated with high rates of psychiatric disorders.^[49-51] This study finding emphasizes the need for close collaboration between psychiatrists and physicians in the comprehensive care of patients suffering from chronic medical disorders. In our study, more than 85% of the subjects who consumed alcohol had a diagnosable psychiatric disorder, of which about 47% received alcohol dependence syndrome diagnosis. Ross *et al.*^[52] found similar findings that four-fifths (78%) of his study sample had a life time psychiatric disorder in addition to substance use, and two-thirds (65%) had a current psychiatric disorder.

Implications of this study

- As per our study findings, approximately one out of four subjects had a psychiatric disorder. If the same prevalence is approximated to the overall population of India (total population as per 2011 census-1,21,01,93,422)^[53], the subjects with a diagnosable psychiatric disorder might be up to 25-30 crores (250-300 million). This figure emphasizes the quintessential need to upgrade the existing mental health training and treatment facilities
- Our findings should sound the waking alarm for dedicating more focus and resources to the field of psychiatry and serve as a foundation for the policy makers and the research councils to take necessary steps
- Deficit of mental health professionals to address the highly prevalent mental health disorders as shown by our study can be contained by stressing on training of undergraduate medical and nursing students in psychiatry. Early quality training in psychiatry might also motivate many young doctors and nurses to specialize in psychiatry, which would further help in reducing the current deficit in mental health professionals and also equip us in handling the ever increasing morbidity due to psychiatric disorders.

CONCLUSION

Our study is among the very few epidemiological studies with respect to methodological design, avoiding screening questionnaires and evaluating each subject with detail administration of MINI and other set of questionnaires. Our study concluded that 24.40% of the subjects were suffering from one or more diagnosable psychiatric disorder. The need of the hour is in addressing major challenges such as

lack of mental health professionals, societal stigma, and deficits in financial aid, which are the major threats for providing a comprehensive psychiatric care.

In spite of best efforts, the ratio between psychiatrists and general population is worsening day-by-day. Improving the training of undergraduate medical and nursing students will play a significant role in addressing the increasing Psychiatric morbidity. It's time to stop the long-term debate questioning prevalence rates of psychiatric disorders and move forward with actions to improve and to provide comprehensive mental health care for all those in need.

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Appendix I: Distribution of major psychiatric disorders based on age groups

	<5 yrs	6-10 yrs	11-17 yrs	18-25 yrs	26-30 yrs	31-40 yrs	41-50 yrs	41-50 yrs	61-65 yrs	66-75 yrs	>75 yrs
Diagnosable psychiatric disorder present	0.00%	5.70%	6.70%	16.20%	18.10%	28.00%	39.90%	39.90%	50.50%	58.90%	44.90%
Major depressive disorder	0.00%	0.40%	0.50%	7.70%	7.20%	9.60%	6.50%	6.50%	7.60%	4.70%	10.20%
Major depressive disorder with melancholia	0.00%	0.00%	0.00%	0.00%	0.60%	2.80%	3.70%	3.70%	8.60%	11.20%	8.20%
Recurrent depressive disorder	0.00%	0.00%	0.00%	0.40%	0.60%	0.20%	9.30%	9.30%	13.30%	15.90%	4.10%
Substance induced depression	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%
Dysthymia	0.00%	0.00%	0.50%	1.50%	0.00%	1.60%	1.10%	1.10%	5.70%	4.70%	0.00%
Bipolar type 1	0.00%	0.00%	0.00%	0.40%	1.70%	0.00%	0.80%	0.80%	0.00%	0.00%	0.00%
Bipolar type 2	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%	0.60%	0.60%	1.90%	0.00%	0.00%
Social phobia	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Alcohol dependence disorder	0.00%	0.00%	0.00%	1.00%	1.90%	7.70%	8.20%	8.20%	0.00%	0.00%	0.00%
Alcohol abuse	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Nicotine dependence	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%	0.60%	0.60%	3.80%	0.00%	0.00%
Schizoaffective disorder	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%	0.00%	0.00%	0.00%
Generalised anxiety disorder	0.00%	1.30%	2.30%	1.30%	3.30%	3.30%	0.30%	0.30%	4.80%	0.00%	0.00%
Somatization disorder	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.30%	2.30%	0.00%	1.90%	0.00%
Somatoform pain disorder	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.80%	0.80%	0.00%	0.00%	0.00%
Conduct disorder	0.00%	1.30%	1.30%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Attention deficit hyperactivity disorder	0.00%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Oppositional defiant disorder	0.00%	0.40%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mixed anxiety and depression	0.00%	0.00%	0.30%	1.20%	2.20%	0.60%	5.40%	5.40%	2.90%	5.60%	0.00%
Epilepsy	0.00%	0.00%	0.00%	0.00%	0.60%	0.40%	0.00%	0.00%	0.00%	2.80%	0.00%
Mental retardation	0.00%	0.90%	1.50%	0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%
Dementia	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	12.10%	22.40%

P Value = 0.000

Appendix II: Distribution of major psychiatric disorders based on socioeconomic group

	Upper class	Upper middle class	Lower middle class	Upper lower class	Lower class
Diagnosable psychiatric disorder present	35.20%	16.50%	21.00%	31.90%	33.30%
Major depressive disorder	6.60%	4.70%	5.60%	6.40%	7.20%
Major depressive disorder with melancholia	4.40%	1.20%	1.60%	2.60%	2.90%
Recurrent depressive disorder	4.40%	3.00%	3.50%	6.20%	5.80%
Bipolar type 1	1.10%	0.20%	0.50%	0.80%	0.00%
Bipolar type 2	1.10%	0.30%	0.20%	0.40%	0.00%
Alcohol dependence disorder	3.30%	1.00%	1.70%	5.90%	7.20%
Nicotine dependence	2.20%	0.20%	0.00%	0.80%	1.40%
Generalised anxiety disorder	4.40%	1.40%	1.70%	2.30%	1.40%
Mixed anxiety and depression	5.50%	1.40%	2.10%	1.90%	0.00%
Dementia	0.00%	0.30%	0.60%	1.40%	4.30%

P=0.000