

A Study on Mental Disorders: 5-year Retrospective Study

Thalappillil Mathew Celine, Jimmy Antony

Department of Community Medicine, Malankara Orthodox Syrian Church, Medical College, Kolenchery, Ernakulam, Kerala, India

ABSTRACT

Background: "Mental disorder" is the most common used term in the modern life and the main reason behind this may be the mechanical way of life or stress and strain among youth. **Aim:** To find the pattern of mental disorders of hospitalized patients in a medical college hospital from 1st April 2005 to 31st March 2010. **Settings and Design:** A retrospective study conducted among the patients admitted with mental disorders in a medical college hospital from 1st April 2005 to 31st March 2010. **Materials and Methods:** Data collected from the registers maintained in the medical records department. **Statistical Analysis:** Z test is used for the comparison of proportions. **Results:** A total of 7908 mental disorder cases reported in the medical college hospital, 5564 (70.36%) were males and 2344 (29.64%) were females. Most cases occurred in the age group of 30-44 years. Mental disorder was more among females than males in 0-29 years and ≥ 60 years, but in 30-59 years males were more. In each year, mental disorders were reported more in males than females. Of the cases, most of them were mood disorders. Mental and behavioral disorders due to psychoactive substance use were more among males but schizophrenia, delusional disorders, mood disorders, stress-related disorders, mental retardation, and so on were more among females. **Conclusion:** Mood disorder was the most occurred mental disorder and the next leading mental disorder was mental and behavioral disorders due to psychoactive substance use. Counseling can be helpful for preventing most of the mental disorders. Improve the mental health care facilities will be the solution for controlling the mental disorders.

Keywords: Age, anxiety disorder, mental disorder

Introduction

Mental disorder is a psychological factor reflected in the behavior, which affect the normal development of a person's culture. Mental and behavioral disorders are found in people of all regions, countries, and societies. It may be associated with functions of the brain or nervous system. The personality disorders are emerging in childhood or at least by adolescence or early adulthood. Personality disorders incorporate a mixture of acute dysfunctional behaviors that may resolve in short periods.^[1] The main objective of the study is to find the pattern of mental disorders of patients admitted in a medical college hospital.

Materials and Methods

Ethics

This study conducted among patients admitted with mental

disorders in a medical college hospital from 1st April 2005 to 31st March 2010. Data collected from the registers maintained in the medical records department of the medical college hospital situated in Ernakulam district, Kerala, India. The study was done with the permission of institutional ethics committee.

Study design

Selection of description of participants

It is a retrospective study design. The study conducted among patients those who admitted in the hospital with mental disorders from 1st April 2005 to 31st March 2010. The study conducted in the medical college hospital situated in Ernakulam district.

The study population consists of all patients admitted in the medical college hospital due to mental disorders during the period from 1st April 2005 to 31st March 2010. Data collected from the registers maintained in the medical records department. Medical record department follows the guidelines of International Classification of Diseases (ICD)-10 coding.

Address for correspondence: Asso. Prof. T. M. Celine, Department of Community Medicine, Malankara Orthodox Syrian Church Medical College, Kolenchery, Ernakulam - 682 311, Kerala, India. E-mail: celin09@rediffmail.com

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Statistics

Z test is applied for the comparison of proportions. If *P* value less than or equal to 0.05 indicates that there is significance difference between the proportions of two groups. Microsoft Excel was used for analyzing the data. The data were collected according to the ICD-10 coding.

Results

The total number of mental disorder cases reported in the medical college hospital was 7908. Of the total cases, 5564 (70.36%) were males and 2344 (29.64%) were females.

In Table 1, 2nd column contains the number of mental disorder cases and percentages among males in each age group and 3rd column contains the number of mental disorder cases and percentages among females in each age group. Most of the mental disorder cases reported in the age group of 30-44 years. The third most mental disorder cases reported in the age group of 18-29 years. This may be happened due to stress and strain. In the age group of 0-29 years, mental disorder was more among females than males but in the 30-59 years mental

Table 1: Comparing sex-wise proportion of mental disorders reported in each age group

Age group	Male	Female	Total	P value
0-9	358 (6.4%)	207 (8.8%)	565 (7.1%)	0.0017
10-17	108 (1.9%)	113 (4.8%)	221 (2.8%)	0.0001
18-29	898 (16.1%)	573 (24.4%)	1471 (18.6%)	0.0001
30-44	2209 (39.7%)	687 (29.3)	2896 (36.6%)	0.0001
45-59	1462 (26.3%)	491 (20.9%)	1953 (24.7%)	0.0001
≥60	529 (9.5%)	273 (11.6%)	802 (10.1%)	0.0001
Total	5564	2344	7908	

disorders was more occurred among males. Mental disorders were more occurred among females than males in the age group of ≥60 years.

#Male mental disorder was more in males than females in each year shown in Figure 1.

In Table 2, 2nd column represents the number of cases and percentage of cases among male cases, 3rd column represents the number of cases and percentages of cases among females, and 4th column represents the total number of cases and percentage of cases among the total cases. Sex-wise difference was occurred in following mental disorders such as dementia, mental and behavioral disorders due to psychoactive substance use schizophrenia, schizotypal and delusional disorders, mood disorders, neurotic, stress-related and somatoform disorders,

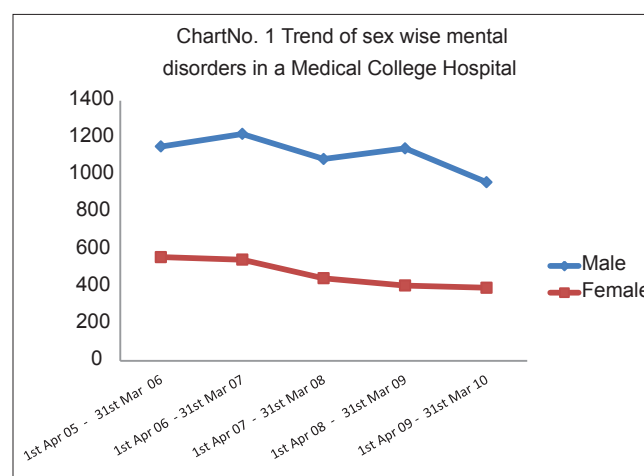


Figure 1: Male mental disorder was more in males than females in each year

Table 2: Pattern of mental disorder cases of patients admitted in a medical college hospital from 1st April 2005 to 31st March 2010

Types of mental disorders	Male (%)	Female (%)	Total (%)	P value
Dementia (F00-F03)	69 (1.2)	44 (1.9)	113 (1.4)	0.0143
Organic amnesic syndrome, not induced by alcohol and other psychoactive substances.(F04)	0 (0)	0 (0)	0 (0)	
Delirium, not induced by alcohol and other psychoactive substances (F05)	35 (0.6)	20 (0.9)	55 (0.7)	0.1378
Other mental disorders due to brain damage and dysfunction and to physical disease.(F06)	19 (0.3)	10 (0.4)	29 (0.37)	0.5028
Personality and behavioral disorder due to brain disease, damage, and dysfunction (F07)	71 (1.3)	42 (1.8)	113 (1.43)	0.1074
Unspecified organic or symptomatic mental disorder.(F09)	14 (0.3)	12 (0.5)	26 (0.33)	0.2112
Mental and behavioral disorders due to psychoactive substance use.(F10-F19)	2465 (44.3)	18 (0.8)	2483 (31.4)	0.00001
Schizophrenia, schizotypal, and delusional disorders (F20-F29)	494 (8.9)	359 (15.3)	853 (10.79)	0.0001
Mood disorders (F30-F39)	2187 (39.3)	1560 (66.6)	3747 (47.38)	0.00001
Neurotic, stress-related and somatoform disorders.(F40-F48)	87 (1.6)	182 (7.8)	269 (3.4)	0.00001
Behavioral syndromes associated with physiological disturbances and physical factor (F50-F59)	6 (0.1)	23 (1)	29 (0.37)	0.0001
Disorders of adult personality and behavior (F60-F69)	9 (0.2)	2 (0.09)	11 (0.14)	0.2006
Mental retardation (F70-F79)	75 (1.3)	53 (2.3)	128 (1.62)	0.0019
Disorders of psychological development (F80-F89)	2 (0.04)	0	2 (0.03)	
Behavioral and emotional disorders with onset usually occurring in childhood and adolescence (F90-F98)	29 (0.5)	16	45 (0.57)	0.3078
Unspecified mental disorder (F99)	2 (0.04)	3	5 (0.06)	0.2542

behavioral syndromes associated with physiological disturbances and physical factor, mental retardation. Mental and behavioral disorders due to psychoactive substance use were more among males than females. Schizophrenia, schizotypal and delusional disorders, mood disorders, neurotic, stress-related and somatoform disorders, behavioral syndromes associated with physiological disturbances and physical factor, mental retardation was more occurred among females than males of the dementia cases, dementia in Alzheimer's disease was more in males than females but in the unspecified dementia was more in females than males [Table 3].

Discussion

Anxiety or fear that interferes with normal functioning of a person called anxiety disorder.^[2] World Health Organization's report showed that neuropsychiatry disorders had an aggregate point prevalence of about 10% for adults.^[3] The fundamental characteristics of a person that influence thoughts and behaviors across situations and time may be disordered if judged to be abnormally rigid and maladaptive. A range of developmental disorders that initially occur in childhood may be diagnosed as autism spectrum disorders, oppositional defiant disorder and conduct disorder, and attention deficit hyperactivity disorder, which may continue into adulthood.

In the world, most of the countries report more than one in three people suffering at least one type of mental disorders in their life.^[4] Kessler *et al.*,^[5] study report mentioned that in the United States, 46% of people suffering mental illness at some point. Australian bureau of Statistics National Survey of Mental Health and Wellbeing report mentioned that about 45% of adult Australians will experience a mental illness at some stage in their lives.^[6] The meta-analysis of available Indian studies carried out by Reddy and Chandrasekhar^[7] mentioned that the overall prevalence of mental disorders was 5.8% among the population. In the developing countries, psychiatric morbidity range from 40% to 75%.^[8] According to State Mental Health Authority (KSMHA), mental illness in Kerala is 1.5 to 2 times more prevalent in women than men.^[9] Dr C.J. John, Chief Psychiatrist, Medical Trust Hospital, Kochi, says divorces as well as growing unemployment are directly linked to the mental illnesses among women.^[9] A meta-analysis of 13 studies consisting of 33,572 persons carried out by Reddy

and Chandrasekar^[7] revealed that the total mental disorder morbidity was 5.82%, while Ganguli^[10] estimated the same as 7.3% from his meta-analysis of 15 Indian studies. Kerala State Mental Health Authority figures showed that 10% of the state's population suffers from psychiatric disorders, 2% have severe psychiatric disorders such as schizophrenia and manic depression, 2-3% suffers psychosomatic disorders and neurosis and one in every 100 kids below 6 years of age is mentally retarded. "South India in general has higher incidence of mental illnesses. Kerala's condition has been made worse by contributory factors in which the state tops the country, such as alcoholism, suicides, divorces, and domestic violence. Sadly, many of these are the downside of Kerala's social progress. They are problems that affect a developed society," says Dr. D Raju, Secretary, Kerala State Mental Health Authority.^[9] The Kerala State Crime Records Bureau says mental illnesses are the reason behind 19% of the suicides in the state. Kerala has the highest suicide rate in India after Sikkim: 25.3 for every 1,00,000 people.^[9]

An ongoing survey indicates that anxiety disorders are the most common in all mental disorders, while substance disorders and impulse-control disorders were consistently less prevalent.^[11] A review of anxiety disorder surveys in different countries found average lifetime prevalence estimates of 16.6%, with women having higher rates on average.^[12] In the United States, anxiety disorder was 28.8%^[5,13,14] and in the Alonso *et al.*, study anxiety disorders were 13.6%.^[15] Anxiety disorders frequently co-occur with depressive disorders or substance abuse.^[13] Females have higher rates of anxiety disorders.^[16] Rate of anxiety varies between 16% and 45%.^[17]

Of the global burden of diseases, mental and behavioral disorders account for about 12%^[18] and Demyttenaere K *et al.*, study it was about 10% of the adult population, at any given point of time.^[19] In the present study Mental and behavioral disorders due to psychoactive substance use was 31.4% and behavioral syndromes associated with physiological disturbances and physical factor was 0.37%.

Demyttenaere K *et al.*, study report mentioned that Depression, alcohol use disorders, schizophrenia and bipolar disorders constitute the top 10 conditions contributing to the global burden of disease among the age group of 15-44 years.^[19] Rates of depression vary between 23% and 85% in developed countries.^[20] In the present study mental disorders due to Schizophrenia, schizotypal and delusional disorders was 10.79%. This difference may be occurred due to the present study conducted in the developing country.

Torgersen S *et al.*, study report mentioned that the prevalence of personality disorders (PDs) have been fewer and smaller-scale, but one broad Norwegian survey found a five-year prevalence was 13.4%.^[15] A US survey reported that personality disorder was 14.79%.^[21] In the present study mental disorders due to disorders of adult personality and behavior was 0.14%, Personality and behavioral disorder due to brain disease, damage and dysfunction was 1.43%.

Table 3: Types of dementia cases reported in a medical college hospital during the period from 1st April 2005 to 31st March 2010

Types of dementia	Male (%)	Female (%)	Total (%)	P value
Dementia in Alzheimer's disease (F00)	28 (40.6)	9 (20.5)	37 (32.7)	0.0089
Vascular dementia (F01)	24 (34.8)	12 (27.3)	36 (31.9)	0.3954
Dementia in other diseases classified elsewhere (F02)	0 (0)	2 (4.5)	2 (1.8)	
Unspecified dementia (F03)	17 (24.6)	21 (47.7)	38 (33.6)	0.0001
	69	44	113	

A review of mood disorder surveys in different countries found lifetime rates of 6.7% for major depressive disorder (higher in some studies, and in women) and 0.8% for bipolar I disorder.^[22] In the United States it was 20.8%,^[5,13,14] Alonso *et al.*, study 13.9% mood disorders were reported.^[15] Females have higher rates of mood disorder.^[16] An ongoing survey indicates that mood disorders are the second most disorder in all mental disorders.^[11] In the present study 47.33% of mental disorders were occurred due to mood disorder. This difference may be occurred because of the present study was a hospital based study. Here denominator is taken as the mental disorder cases.

In the United States 24.8% impulse-control disorders were reported.^[5,12,13] A study report mentioned that substance disorders and impulse-control disorders were consistently less prevalent.^[11] In the United States 14.6% substance use disorders^[5,13,14] and Alonso *et al.*,^[15] study 5.2% alcohol disorders were reported. Males have higher rates of substance use disorders and impulse.^[16] In the present study, 31.4% of mental disorder cases were occurred due to mental and behavioral disorders due to psychoactive substance use. This difference may be occurred because of this study conducted in Kerala. The use of alcohol among people in Kerala is much high compared with other states in India and also other countries.

An international review of studies on the prevalence of schizophrenia found an average (median) figure of 0.4% for lifetime prevalence.^[23] In Australia almost one in 100 Australians will experience schizophrenia during their lifetime.^[6] In the present study, 10.79% of mental disorders occurred due to schizophrenia, schizotypal, and delusional disorders.

An Indian study report mentioned that prevalence of dementia in the age group of ≥ 65 years was 1.3%.^[24] A study reported that frequency of dementia in the community dwelling adults older than 65 years was 3%-11%.^[25] Categorization of the 56 cases of dementia by ICD-10 diagnostic criteria showed that 30 (54%) were due to Alzheimer's disease and 4 (7%) were due to other causes (1 case of tuberculous infection, 1 case of head trauma, and 2 cases of cerebral tumors).^[26] The relative proportion of Alzheimer's disease in the Indian studies ranged from 41% to 65%. In the present study, 32.7% of dementia was due to Alzheimer's disease and 1.8% was due other causes.

A study report mentioned that the prevalence of vascular dementia was 11.4 per 1000. Of the 22 persons in the vascular dementia group, 6 were women and 16 were men (1:2.7). There was a male preponderance of vascular dementia.^[26] But in the present study, no sex-wise difference occurred in vascular dementia.

A study reported that the relative proportion of vascular dementia ranged from 22% to 58%.^[27-29] Another study report mentioned that 22 (39%) of dementia were due to vascular dementia.^[26] In rural Kerala, vascular dementia constituted 58% of the total dementia cases.^[27] In studies conducted in rural and urban communities in Tamil Nadu, a neighboring state to Kerala,

vascular dementia constituted 27% and 26% respectively of the total cases.^[28] In the present study, 31.9% of dementia was due to vascular diseases.

Prevalence of mental disorders increases from the youngest group (age: 18-29) to the next oldest age group (age: 30-44) and then declines, sometimes substantially, in the oldest group (age 60+).^[16] The present study also shows that mental disorders increases from the youngest group (age: 18-29) to the next oldest age group (age: 30-44) and then declines.

Conclusion

The study result mentioned that mental disorders are increasing in every year. Mental health care is the most neglected sector in Kerala. The present study elaborates different types of mental disorders in both sexes. Even though, Kerala is fast developing state in India, even comparable to the developed nations in health indicators and number of counseling centers/clinics emerges day by day, the mostly deserved groups are still in darkness irrespective of their social status. So new dimensions like, helpline services or clinics to start in schools, colleges, and other social network areas where the care has to be extended for diagnosing mental problems at the initial stage and arresting its consequences for them and also for the society in which they live.

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