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Statistical analysis of social determinants of mental health problems

Abstract

Mental health is as important as physical health to the overall well being of individuals, societies and countries. To understand what psychiatric services are required for a community, it is necessary to know the frequency of mental disorder in the population and how these disorders became known to the medical services. Alcohol and other drugs related problems, rate of suicide and divorce rate are too high in Kerala. Therefore, we are studying the severity of mental health problem prevailing in Kerala.

This work is an attempt to identify the mental health conditions, and analyze the socio-economic and mental behavior of mentally challenged people. Here we consider the psychiatric problems which affect the social, economic and mental status of people in the society and the reasons for the growth of mental disorders. In addition, we studied about the family background, hereditary and the sleep disturbances of psychiatric patients.

Keywords: mental disorders, sleeping time, parenting style, family life satisfaction

Volume 8 Issue 5 - 2019

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Received: September 02, 2019 | **Published:** November 18, 2019

Introduction

By mental illness, we mean a medical condition, which disturbs a person's intellectual and psychic capacities and ability to have normal relation with others. It may affect daily functioning of the person.[1] Social inequalities result in increased risk of many common mental disorders. Psychiatric disorders differ in their nature, severity, and prevalence. Common causes of Mental Disorders are communities and cultures, relationships, environmental factors, structure of the brain, biological factors, drug intakes etc.[2]

More than one lakh people commit suicide every year in India. The suicide rate of the last three decades has increased by 43%. The suicide rate varies very much in different parts of the country. The suicide rates in the southern states like Kerala, Karnataka, Andhra Pradesh and Tamilnadu is >15. However, the suicide rate in the northern sides of Punjab, Uttar Pradesh, Bihar and Jammu Kashmir comes to <3.[3] This variable pattern has been stable for last 20 years. Majority of suicide in India are by persons below the age of 44 years, which impose a huge social, emotional, and economic burden. The impact of psychiatric problem has social, cultural and economic implications. Hence, it is necessary to analyze how psychiatric problems affect the socio economical and mental life of people in the society.

Methods

The study seeks to employ the inter disciplinary research methods. Empirical, historical and analytical modes of investigation have been envisaged in this study.

Idukki which is a high range district of Kerala is blessed with mountains and thick forest. It is situated in the middle of Kerala. Its boundaries are Tamilnadu the east, Pathanamthitta district in the south. Kottayam and Ernakulam districts in the west and Trichur in the north. Because of its natural beauty, it has turned to be a tourist attraction. A large number of tourists are attract to it. Idukki has mixed culture due to the large scale of migration from other parts of Kerala and from the neighboring states. Idukki district has a population 1, 107, 453 according to the 2011 census. Sex ratio1006 females for every 1000 males. Its literacy rate is 92.2 percent.[4]

This study is conducted at Bishop Vayalil Medical centre, Moolamattom, well-known psychiatric hospital in Kerala. Patients with psychiatry problems were made subject from study the data are collected from the clinical information and interview with patients, informant or both.

The basic objective of this study is the socio-demographic profile of psychiatric patients. Considering the time and resources, available 200 patients are included in this study. The data collection is based on the incidental sampling method. The clinical information and the interview schedule are using for data collection by interviewing either the patient or the informant or both as appropriate.

The collected data is analyzed by using the SPSS v17.0 software. The basic characteristics of the subjects are presented as a proportion. For categorical variables, interdependence is tested by the chi square test. For scale variables, t-test is used to determine the significance of the difference between the two means. P value of <0.05 was considered statistically significant.

Results

Age –wise classification of respondents

Psychiatric problems affect almost all sections of the populations. Mostly middle-aged persons are more vulnerable to diseases. The possible reason could be that most of the patients between 20 and 50 belong to the economically productive and therefore they were brought for the right care (Table 1) (Figure 1).

Table 1:Age–Wise classification

Age	Frequency	Percent
20-30	27	13.5
30-40	77	38.5
40-50	53	26.5
50-60	33	16.5
60-70	10	5.0
Total	200	100.0

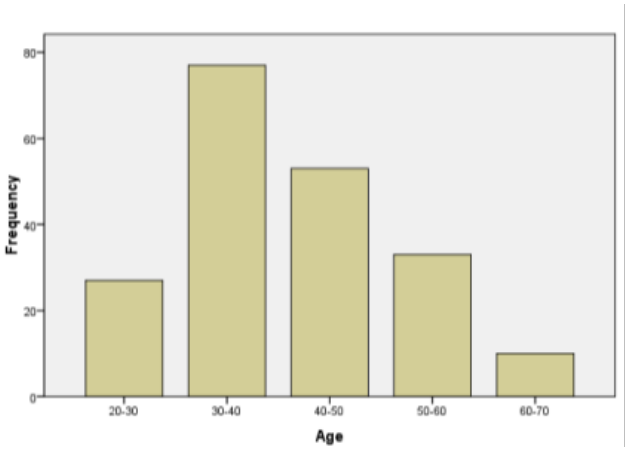

Figure 1: Age–Wise classification.

Gender-wise classification of respondents

Gender equality is considered a sign of progress. In Kerala, gender equality is almost at a favorable level. But in psychiatric patients, this equality is not observed. The distribution in this study highly concentrated on males (74%) since the findings the present study prove the fact that male patients use the psychiatric hospitals service more than the female patients (Table 2).

Table 2: Gender–Wise distribution

Sex	Frequency	Percent
Male	148	74.0
Female	52	26.0
Total	200	100.0

Socio-cultural and psychological factors

It is a well-recognized fact that poverty has important implications for both physical and mental health. One study, observes the fact that people who are depressed are those who have a decline in social position and financial circumstances.[5] The majority of patients in our study have lower or middle socio –economic status. They have low level of literacy and have the rural or semi urban background (Table 3-5).

Table 3: Place of residence

Place	Frequency	Percent
Urban	48	24.0
Rural	89	44.5
Semi Urban	61	30.5
Tribal	2	1.0
Total	200	100.0

Table 4: Class of Family

Class Of Family	Frequency	Percent
Lower Middle	13	6.5
Middle	176	88.0
Upper	11	5.5
Total	200	100.0
Lower Middle	13	6.5

Table 5: Education Wise Classification

Education Qualification	Frequency	Percent
Below X	101	50.5
P D C	51	25.5
Degree	28	14.0
P G	10	5.0
Professional	10	5.0
Total	200	100.0

Marriage and mental health problems

People for whom marriage is stressful are vulnerable and lead to the development of mental health problems. Marital disharmony is caused or the result of major mental health disorders. Couples to seek divorce have generally the high psychiatric morbidity in comparison with well adjusted couples with more neurotic traits.[6] The personality factors of divorce-seeking couples also differ from those of couples in stable marriages. Married mentally ill women are more likely to be sent back to their natal homes, abandoned, deserted or divorced (Table 6).

Table 6: Marital status

	Frequency	Percent
Married	89	44.5
Unmarried	105	52.5
Divorced	2	1.0
Separated	4	2.0
Total	200	100.0

Family life satisfaction

Life satisfaction can reflect experiences that have affected a person in a positive way. These experiences have the ability to motivate people to pursue and reach their goals. From the study, it is clear that 66% of patients' family life is not satisfied (Table 7).

Table 7: Family life satisfaction

	Frequency	Percent
Yes	68	34.0
No	132	66.0
Total	200	100.0

Parenting style

Children's behavior or symptoms of behavior are directly affected by the parent's style in dealing with them in the family. There are proves to co-relate parent's style and children's behavioral problems.[7] The family is a socio-cultural-economic arrangement that exerts significant influence on children's behavior and the development of their characters. From the study parenting, style and family life satisfaction are dependent (Table 8) (Figure 2).

Table 8: Parenting style

	Frequency	Percent
Healthy	81	40.5
Rigid	41	20.5
Faulty	78	39.0
Total	200	100.0

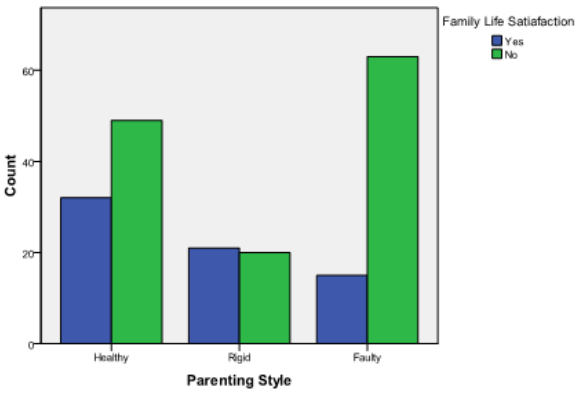

Figure 2: Parenting style and family life satisfaction.

Eating disorder

Disorders in eating are illnesses. Because of them victims, suffer serious disturbances in eating and related thoughts and emotions. Such parents typically become obsessed with food and their weight increases. Eating disorders affect some several million people at any given time, most often women between the ages of 12 and 35 [8]. In many cases, eating disorders occur together with other psychiatric disorders like anxiety, panic, obsessive compulsive disorder, and alcohol and drug abuse problems. From the study, it is clear that 42% patients have eating disorders (Table 9).

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.094		
Likelihood Ratio	14.535		
Linear-by-Linear Association	7.123	2	.001
No.of Valid Cases	200	2	.001
Pearson Chi-Square	14.094	1	.008

Table 9: Eating disorder

	Frequency	Percent
Yes	84	42.0
No	116	58.0
Total	200	100.0

Sleeping problems

Sleep disorders are among the most common clinical problems encountered in medicine and psychiatry. Sleep disorders may be primary or may result from a variety of psychiatric and medical conditions. The most common disorder, causing sleep complaint includes depression, anxiety and substance (illicit drugs and alcohol) abuse (Table 10&11).[9]

Table 10: Sleeping problem

	Frequency	Percent
No	95	47.5
Yes	105	52.5
Total	200	100.0

From the table (Table 10) clear those 52% patients have sleeping problem. Average sleeping time before treatment is 4.32 hours and standard deviation 2.006 and after the treatment is sleeping time is 7.37 hours and standard deviation 1.114.

Sleeping time is increased after the treatment

Time of the day you feel worse

We all feel fed up, miserable or sad at times. These feelings do not usually last longer than a week or two, and they do not interfere too much with our lives. Sometimes there is a reason, sometimes not. We usually cope - we may talk to a friend but do not otherwise need any help (Table 12).

Time of depressed mood and thought of ending your life is not significant.

Table 11: Paired t Test for testing the increase in sleeping time after treatment

		Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Sleep B.T - Sleep A.T	-3.060	2.438	.172	-17.747	199	.000

Table 12: Time of depressed mood

	Frequency	Percent	Valid Percent	Cumulative Percent
Waking in the morning	117	58.5	58.5	58.5
End of the day	83	41.5	41.5	100.0
Total	200	100.0	100.0	

Time of Depressed Mood and Thought of Ending Your Life

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.858	1	.354		
Continuity Correction[b]	.605	1	.436		
Likelihood Ratio	.862	1	.353		
Fisher's Exact Test				.377	.219
Linear-by-Linear Association	.854	1	.355		
N of Valid Cases	200				

Starting age of Illness – Distribution

Some mental disorders affect men and women equally. They take place in all ethnic groups around world. Symptoms such as hallucinations and delusions usually appear between 16 and 30. Men begin to experience symptoms a little earlier than women. Most of the time, people do not get schizophrenia after age 45. Schizophrenia rarely occurs in children, but awareness of childhood-onset schizophrenia is increasing (Table 13&14).[10]

Table 13: Starting Age of Illness

	Frequency	Percent	Valid percent	Cumulative percent
Below 15	43	21.5	21.5	21.5
15 - 25	122	61.0	61.0	82.5
25 - 35	28	14.0	14.0	96.5
35 - 45	2	1.0	1.0	97.5
Above 45	5	2.5	2.5	100.0
Total	200	100.0	100.0	

Table 14: Starting age of Illness* Presence of similar illness in the family cross tabulation

		Presence of similar illness in the family		Total
		Yes	No	
Starting age of Illness	Below 15	21	22	43
	15 - 25	56	66	122
	25 - 35	11	17	28
	35 - 45	2	0	2
	Above 45	0	5	5
Total		90	110	200

Presence of similar illness in the family

Depression and mental illnesses are often hereditary. They can pass on one generation to another. This means that a person with family history of illness may develop mental disorders. It is believed that mental illness may lead to various abnormalities. This is the reason why the person inherits the vulnerability to develop this illness, but does not inherit the illness itself (Table 15).

Table 15: Presence of Similar Illness in the Family

	Frequency	Percent	Valid Percent	Cumulative percent
Yes	90	45.0	45.0	45.0
No	110	55.0	55.0	100.0
Total	200	100.0	100.0	

From the study, it is clear that 45 % patients have presence of similar illness in the family.

Discussion and conclusion

The basic health facilities are the best in Kerala comparing to other Indian states and keeps equal standard of the developed countries. Low birth ratio, higher female sex ration, low infant mortality and high expectancy had to be note in Kerala in this connection. Kerala has a high suicide rate and this has been attributed to family problems, marital reasons, cultural factors, social stigma and lack of focus on psychiatric problems**.** Older persons are vulnerable to psychiatric problems not only due to biology alone but also due to various other social factors such as isolation, poverty, lack of caregivers etc.

The studies approved that the majority of patients in the mental hospital suffered from severe mental illnesses. They belong to mainly male gender, rural locality, lower socio-economic class, and low educational status. Majority of them suffer sleeping problems. Average sleeping time is increased after the treatment. The Mental Status examination notes that concentration power, orientation power and memory power are average in them. They have often psychological symptoms like depressed mood, loss of interest to pleasure and restlessness. The main reasons for such problems are hereditary, alcoholism and family problems. Most patients show no interest for work and for entertainment and meditation. Psychiatric disorders very often appears in the relatively younger age group. Study also shows that nearly 66% of patient's of the family is not satisfied.

Mental health care priorities need to be shifted from psychotic disorders to common mental disorders and from mental hospitals to primary health centers. Future research needs to focus on the general population, longitudinal (prospective), multi-centre, co-morbid studies, assessment of disability, functioning, family burden and quality of life studies involving a clinical service providing approach.

Acknowledgments

None.

Conflicts of interest

The author declares that there are no conflicts of interest.

Funding

None.

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