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## **Gender Disparities in Health Seeking Behaviour of Epilepsy Patients in Tertiary Care Facility of Rural Karnataka.**

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### **Abstract**

The present study is carried out in the epilepsy clinic of RIMS Teaching Hospital, Raichur to study gender specific demographic, medical and social disparities in health seeking behaviour among patients attending epilepsy clinic. Cross sectional hospital based study carried out in patients attending Epilepsy Clinic of Raichur Institute of Medical Sciences, Raichur, Karnataka. Objective of the study was to uncover the gender specific medical and social disparities in health seeking behaviour of the study subjects. More than two third study subjects were illiterates. During the epileptic attack female patients were following more false beliefs than sound practices; also after the attack they showed significant delays in seeking health care as compared to their male counterparts. Women with epilepsy are significantly older than their male counterparts. Gender specific medical and social disparities were observed in health seeking behaviour of female epileptic patients.

**Key words:** Gender disparities, health seeking, epilepsy

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### **Introduction**

Epilepsy is the oldest recorded medical condition and the most common disorder of the brain. Epilepsy (Apasmara) is thought to be the result of having sinned in previous lives or is dependent on lunar influence [1]. These beliefs have continued with little change to the present day [2]. Epilepsy is the most common serious neurological disorder, affecting about 50 million people worldwide. Every year nearly two million people develop epilepsy. The disorder imposes a high economic burden on individuals with the condition, on their caretakers & family, and on the health services [1]. The World Health Organization (WHO) estimates of disability adjusted life years (DALYs) suggest that epilepsy accounts for 0.5% of the world's burden of disease, which is the same as lung cancer among men or breast cancer among women [3]. There are more than 50 million people with epilepsy in the world [3] and ~8-10 million in India [1]. About half million are added to it each year. In India the prevalence of active epilepsy varies in different regions. The recent meta-analysis of published and unpublished studies put the overall prevalence of epilepsy in India at 5.59 per 1000 population. Furthermore it is important to note that males and females bear this burden almost equally [4-8]. Under estimation is inevitable especially among females in whom the concealment is a norm mostly because of social unacceptability of a girl or woman with epilepsy

[9,10]. Specific issues such as menstruation, sexual relations, marriage, pregnancy, breast feeding, religious fasts, menopause and occupation makes women with epilepsy more vulnerable for adverse health consequences [11]. Also gender discrimination of females in the form of less food intake, lower education, less access to health facilities and lower purchasing power<sup>12</sup> make this half of human race more susceptible to medical as well as social ill effects of epilepsy.

The present study is designed to know the gender specific disparities in health seeking behaviour of patients attending epilepsy clinic at Raichur Institute of Medical Sciences Teaching Hospital, Raichur, Karnataka.

### **Material Methods**

#### **Settings**

Raichur Institute of Medical Sciences (RIMS), Raichur is tertiary care government institute located in, and catering to, the rural population of North Karnataka. The present cross sectional study is carried out among the epilepsy patients attending the epilepsy clinic of RIMS Teaching Hospital, Raichur.

#### **Research question**

1. Whether the women with epilepsy differ demographically with their male counterparts?

2. What are the gender specific medical and social disparities in health seeking behaviour among women?

### Selection of study subjects

Patients of epilepsy are diagnosed and managed by the teaching faculties of the department of Psychiatry. All adult patients attending epilepsy clinic during May to July 2009 were interviewed face to face using pre-designed and pre-tested questionnaire. Patients having any other psychological or physical disease besides epilepsy were excluded from the study. A thorough pre-training of a local 'kannada' speaking medical student and a resident doctor of Psychiatry was carried out for proper filling up of questionnaire. Socio-demographic characteristics, history of alternative forms of treatment, characteristics of treatment providers and measures taken by the care taker during the attack of epilepsy were noted.

### Ethical issues

The study was approved by the institutional ethical committee of RIMS. An informed consent of all the study participants was collected before enrolment into the study.

### Statistical analysis

The individualized data was entered into spreadsheet programme. The level of significance was assessed by the 95% confidence interval. Proportions and chi square tests applied where ever necessary to assess the significant difference in two groups. Statistical software Epi Info version 3.5.1 was utilized for testing the difference in the proportion.

### Observations and Discussion

A total 200 patients 136 (68%) males and 64 (32%) female patients were participated in the study. The mean ages (SD) of the males, females and total study subjects were 29.0 ( $\pm 7.2$ ) years, 33.4 ( $\pm 6.7$ ) years and 30.4 ( $\pm 6.9$ ) years respectively. More than two thirds of the study subjects were illiterate and in similar proportion were labourers working on daily wages (Table 1). Females had significant delay in seeking health care (Table 2). During the epileptic attack 70.59% of men were treated with sound practices, while only 54.69% women received sound practices from their respective family members (Table 3).

**Table 1.** Demographic and socio-economic gender disparities among study subjects

Characteristics	Sex		Total	Significance
	M	F		
<b>Age</b>				$\chi^2=19.16$ (with Yates) p=0.00001
<30 years	89 (65.44)	20 (31.25)	109 (54.50)	
>30 years	47 (34.56)	44 (68.75)	91 (45.50)	
Total	136 (100)	64 (100)	200 (100)	
<b>Education*</b>				$\chi^2=1.57$ d.f.=1 p=0.21
Illiterates	97 (71.32)	40 (62.5)	137 (68.50)	
School	31 (22.79)	20 (31.25)	51 (25.50)	
Higher	8 (5.88)	4 (6.25)	12 (6.00)	
Total	136 (100)	64 (100)	200 (100)	
<b>Occupation<sup>†</sup></b>				$\chi^2=65.11$ (with Yates) d.f.=1 p<0.0000000
Unemployed	008 (05.88)	37 (57.81)	45 (22.50)	
Student	015 (11.03)	06 (09.38)	21 (10.50)	
Worker on daily wages	112 (82.35)	19 (29.69)	131 (65.50)	
Professionals	01 (0.74)	02 (3.13)	03 (01.50)	
Total	136 (100)	64 (100)	200 (100)	
<b>Monthly per capita income<sup>‡</sup> (in Rs.)</b>				$\chi^2= 6.42$ d. f.=2 p=0.040
≤ 500	60 (44.11)	40 (62.5)	107 (53.50)	
501-1000	37 (27.21)	16 (25.00)	48 (24.00)	
1001-1500	24 (17.65)	05 (7.81)	27 (13.50)	
1501-2000	06 (04.41)	02 (03.13)	08 (04.00)	
>2000	09 (06.62)	01 (01.56)	10 (05.00)	
Total	136 (100)	64 (100)	200 (100)	

\*Illiterates were tested against literates according to the gender.

<sup>†</sup>Students were excluded from analysis & employed tested versus unemployed among both the sexes.

<sup>‡</sup>Per capita income tested gender wise in three groups ( $\leq 500$ , 500-1500 and  $>1500$ )

**Table 2.** Delay in initiation of appropriate treatment

Delay in appropriate treatment initiation	Sex		Total	Significance
	M	F		
Within 7 days	73 (53.68)	12 (18.75)	85 (42.50)	$\chi^2=28.68$ d.f.=2 p=0.0000006
7-30	49 (36.03)	21 (32.81)	70 (35.00)	
> 30 days	14 (10.29)	31 (48.44)	45 (22.50)	
Total	136	64	200	

**Table 3.** Preventive measures taken by the families of epilepsy patients

Measures	Sex		Total	Significance
	M	F		
Sound practices <sup>†</sup>	96 (70.59)	35 (54.69)	131 (65.5)	$\chi^2=4.87$ (with Yates) p=0.03
False beliefs <sup>‡</sup>	40 (29.41)	29 (45.31)	69 (34.50)	
Total	136 (100)	64 (100)	200 (100)	

<sup>†</sup>Sound practices includes getting away from dangerous objects, not locking bathrooms/ toilets, avoiding going alone, use of ID cards in travel. <sup>‡</sup> Use of keys and other objects to open mouth, onion smelling etc.

This difference was statistically significant and indicates that about half of women epilepsy patients’ families do not follow sound practices during epileptic attack. This may expose them significantly for adverse health consequences. Before initiating hospital based specialists’ treatment most of the patients had completed their rounds with allopathic practitioners (12.5%), ayurvedic vaidyas (27.5%) and quacks (8%). On an average male epileptic patients sought at least 2 traditional healers and female patients sought almost three (avg. 2.86). Among women study subjects more false beliefs were prevalent than sound practices.

Epilepsy patients in the study were young and of socio-economically productive age group. Female epilepsy patients were significantly older than the male patients. More than half epileptic females were unemployed. Further enquiry revealed that in the locality only those with epilepsy or other severe disease were compelled to stay at home unlike their counterparts who were enjoying more economical and social stability due to employment. In a case control study looking into the needs of epilepsy it was noted that more women were unemployed and had problems at work place due to seizures [13].

Education wise there were no significant gender disparities but it is notable that more than two third patients (68.5%) were illiterate. Lakshmi Narasimhan et.al.[13] observed that illiteracy was significantly higher among women with epilepsy.

Per capita income of the families with female epilepsy patient was significantly lower. This reiterates the impact of epilepsy in female on their families resulting into social and economical shift back.

Lakshmi Narasimhan et.al.[13] stated that three fourths of the women do not receive modern anti-epileptic drugs. However, in rural India 51% epilepsy patients seek traditional practitioners for treatment [14]. Studies abroad also suggest use of traditional medicine by significant number (71.7%) of epilepsy patients [15].

There was evidence of both exclusivity and pluralism, that is 42% of families first consulting allopathic practitioners also visited the traditional practitioners and 30% of families first consulting traditional practitioners also went to allopathic practitioners.

The average delay in initiation of appropriate treatment was 20.7 and 42.6 days for males and females respectively. Therefore it is observed that there was significantly longer delay in females.

### Conclusion

Women with epilepsy are significantly older than their male counterparts. Also more than half epileptic female were unemployed. Gender specific medical and social disparities were observed in health seeking behaviour of female epileptic patients.

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