

Original Research Article

Quality of life in epilepsy

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ABSTRACT

Background: The quality of life (QOL) evaluation is a relatively new measure to evaluate the outcome of epilepsy. Many factors influence the quality of life of people with epilepsy, including seizure severity, stigma, fear, and the presence of cognitive or psychiatric problems. QOL is influenced by biological factors as well as cultural, social and religious beliefs and values. This study was planned to find out the impact of epilepsy on quality of life of epileptic patients.

Methods: The study was conducted in the epilepsy clinic of department of neurology at a tertiary care hospital over a period of one year. 101 patients were included after fulfilling the inclusion criteria. All the patients seeking treatment in the OPD were screened, assessed and then all procedures were fully explained to them. History regarding name, age sex, socio-demographic profile and detailed history regarding seizure disorder was taken from both the patient and the reliable informant. Bengali version of QOLIE-9 was used to assess the quality of life.

Results: One hundred and one patients with epilepsy consisting of 70 men (69.3%) and 31 women (30.7%) were included. Their ages ranged from 15 to 52, the mean age being 26.17 (SD = 7.84). Out of the 101 patients, 65 patients (64.4%) were suffering from partial epilepsies and 36 patients (35.6%) were suffering from generalized epilepsies. Mean QOLIE-9 total scores were 16.66, 19.74, 20.13 and 24.00 in married, widows, unmarried and separated individuals respectively. The differences in the means were statistically significant on ANOVA (p value 0.002). Mean QOLIE-9 total scores were 27.75, 19.64, 19.65, 18.14 and 18.00 in primary, secondary, higher secondary, graduate and postgraduate individuals respectively. The differences were highly significant statistically on ANOVA (p value < 0.001). Frequency of seizures per month was positively correlated with QOLIE-9 total scores (Pearson Correlation 0.622) and was highly statistically significant (p value < 0.001).

Conclusions: Frequent seizures, lower education level and single status are associated with lower quality of life in persons with epilepsy.

Keywords: Epilepsy, Quality of life, QOLIE-9, Seizures

INTRODUCTION

An epileptic seizure is “a transient occurrence of signs and/or symptoms due to abnormal excessive or synchronous neuronal activity in the brain”.¹ In 2005, the International League Against Epilepsy (ILAE) defined

epilepsy as: “a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures and by the neurobiological, cognitive, psychological, and social consequences of this condition. The definition of epilepsy requires the occurrence of at least one epileptic seizure”.¹

The quality of life (QOL) evaluation is a relatively new measure to evaluate the outcome of epilepsy. QOL is influenced by biological factors as well as cultural, social and religious beliefs and values.²

Many factors influence the quality of life of people with epilepsy, including seizure severity, stigma, fear, and the presence of cognitive or psychiatric problems.³ Dodrill et al suggested that seizures may be only one of several variables that impact the psychosocial functioning of patients with epilepsy.⁴

They found that vocational adjustment is the most frequently reported factor related to patient psychosocial outcome. Measuring the outcome of epilepsy treatment has traditionally assessed seizure frequency and severity, adverse effects and antiepileptic drug levels.

Patients' perceptions often include additional parameters that encompass the effects of epilepsy on daily activities and functions.⁵ So this study was planned to assess the impact of epilepsy on quality of life of epileptic patients.

METHODS

This cross sectional study was conducted in the epilepsy clinic of department of neurology, at a tertiary care hospital over a period of one year. The protocol of this study was approved by the institutional ethics committee prior to reviewing the patient's medical records. Informed consents were taken from all the patients prior to the study.

Sample size was of 101 patients of epilepsy. All the patients seeking treatment in the OPD were screened, assessed and then all procedures were fully explained to them. The patients of age more than 15 years who were

having seizure disorder for the last one year and were on antiepileptic medication regularly were included in the study.

Understanding of Bengali and presence of reliable informant were other necessary criteria for inclusion in the study. Seriously ill patients and having mental retardation and other cognitive deficit were excluded from the study.

History regarding name, age sex, socio-demographic profile and detailed history regarding seizure disorder was taken from both the patient and the reliable informant. Bengali version of QOLIE-9 was used to assess the quality of life. This scale has evolved from QOLIE-10 which is a self-administered questionnaire designed for completion by patient alone.⁵

The obtained data was analyzed using suitable statistical techniques. The Statistical Package for Social Sciences (SPSS) software version 15 was used for all statistical analysis. Values were considered statistically significant when $p < 0.05$.

RESULTS

The study sample ($n = 101$) consisted of 70 men (69.3%) and 31 women (30.7%). Their ages ranged from 15 to 52, the mean age being 26.17 (SD = 7.84). Mean QOLIE-9 total scores were higher in women (21.03) than men (19.17) but not statistically significant (p value 0.081).

Mean QOLIE-9 total scores were 16.66, 19.74, 20.13 and 24.00 in married, widows, unmarried and separated individuals respectively. The differences in the means were statistically significant on ANOVA (p value 0.002).

Table 1: Correlation between clinical and demographic parameters and QOLIE-9 total.

Clinical and demographic parameters	QOLIE- 9 total	
Age (years)	Pearson correlation	-0.149
	Significance (2-tailed)	0.136
Family income per month in rs.	Pearson correlation	-0.175
	Significance (2-tailed)	0.079
Duration of illness (years)	Pearson correlation	0.118
	Significance (2-tailed)	0.242
Period between last attack and interview (in days)	Pearson correlation	-0.182
	Significance (2-tailed)	0.069
Frequency per month	Pearson correlation)	0.622**
	Significance (2-tailed)	0.000*

**High positive correlation; *Highly significant

Mean QOLIE-9 total scores were 27.75, 19.64, 19.65, 18.14 and 18.00 in primary, secondary, higher secondary,

graduate and postgraduate individuals respectively. The differences were highly statistically significant on

ANOVA (p value<0.001). Frequency of seizures per month was positively correlated with QOLIE-9 total

scores (Pearson Correlation 0.622) and was highly statistically significant (p value<0.001).

Table 2: Distribution of QOLIE9 total with respect to clinical and demographic parameters.

Clinical and demographic parameters	Subgroups/categories	N	Qolie9total mean	Std. Deviation	F*	P
Education	Primary	8	27.75	.46	7.94	0.000**
	Secondary	34	19.64	5.03		
	Higher secondary	23	19.65	4.77		
	Graduate	28	18.14	4.17		
	Post graduate	8	18.00	2.13		
Marital status	Unmarried	73	20.13	5.11	5.470	0.002**
	Married	18	16.66	2.22		
	Separated	8	24.00	4.27		
	Widow	2	16.00	.000		
Occupation	Student	26	19.61	3.93	5.286	0.000**
	Unemployed	23	21.47	4.78		
	Service	18	18.11	3.80		
	Business	16	21.25	5.90		
	House wife	10	21.80	5.34		
	Labourer	8	13.25	0.46		

*Using ANOVA; **Significant

DISCUSSION

Though small, this sample was comparable to that of the other previous studies from India.^{2,6} Most of the previous studies on this topic were also carried out in large epilepsy centres.^{5,7} Breier et al compared self-reported quality of life in patients with intractable epilepsy and pseudo seizures.⁸ Bengali QOLIE-9, which is a valid and reliable instrument to assess the quality of life in patients suffering from epilepsy, was used to for this purpose. The Bengali translated version of QOLIE-9 is a valid and reliable instrument in the local context. This scale was translated and validated from QOLIE-10.⁶

The QOLIE-10 can be completed by a patient in several minutes and reviewed rapidly by the physician. This screening tool could provide potentially useful information for initial assessment or follow-up of problem areas that are not commonly evaluated during routine clinical visits with patients with epilepsy.⁵ This is a short scale comprising of 10 items. Short form scales correlate well with longer instruments.⁹ Djibuti et al reported significant higher mean QOLIE scores in women. In this study mean QOLIE-9 total scores were higher in women (21.03) than men (19.17) but not statistically significant (p value 0.081).¹⁰

Mean QOLIE-9 total scores were 16.66, 19.74, 20.13 and 24.00 in married, widows, unmarried and separated individuals respectively. The differences in the means were statistically significant on ANOVA (p value

0.002). This implies that marriage confers some benefit to quality of life. Mean QOLIE-9 total scores were 18.36 and 20.12 in monotherapy and polytherapy groups, the differences were not statistically significant (p value 0.14). However use of polytherapy was associated with poor quality of life, as reported by Thomas et al.²

Mean QOLIE-9 total scores were 27.75, 19.64, 19.65, 18.14 and 18.00 in primary, secondary, higher secondary, graduate and postgraduate individuals respectively. The differences were highly statistically significant on ANOVA (p value<0.001). This shows that education improves quality of life. Similar results were reported by Choi-Kwon S et al.¹¹ Frequency of seizures per month was positively correlated with QOLIE-9 total scores (Pearson Correlation 0.622) and was highly statistically significant (p value <0.001), as also reported by Djibuti et al and Thomas et al.^{2,10}

Duration of illness positively correlated with QOLIE-9 total scores (Pearson Correlation 0.118) and but was statistically insignificant (p value 0.242). Szaflarski et al. found poor quality of life with increase duration of illness. This study showed that increase in family income improves quality of life in epilepsy. But the findings were not statistically significant (p value 0.079).¹²

Limitations

In this study the sample was recruited from a large tertiary hospital hence findings cannot be generalized to

the community. The study design was a cross-sectional, therefore causal modelling could not be attempted. There was no control group, so comparison between groups could not be possible.

CONCLUSION

It can be concluded from this study that quality of life falls with increased seizure frequency (p value <0.001), lower education level (p value <0.001) and single status (p value 0.002). Married people have better quality of life. Quality of life estimate is a useful outcome measure to assess epilepsy care from a patient's perspective. It is relatively easy to give out simple self-administered QOL instruments like QOLIE-9 even in busy epilepsy clinics in developing countries.

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