

## QUALITY OF LIFE OF PATIENTS WITH EPILEPSY

Nikoleta POLIAKOVÁ\* – Eva KRÁLOVÁ – Katarína FUDALYOVÁ

*Alexander Dubcek University of Trencin in Trencin, Faculty of Healthcare, Študentská 2, 911 50 Trenčín*

\*Corresponding author E-mail address: nikoleta.poliakova@tuni.sk

### Abstract

Epilepsy is a neurological disease that occurs all over the world without regard to race, age, sex, geographical location and socio-economic situation. It is a disease which potentially decreases the quality of life. The goal of our contribution is to present research results of the impact of epilepsy on individual dimensions of quality of life and the relationship with duration of the disease, ability to work, co-operation of patients and the membership in EPI association. The research sample consisted of 134 respondents with epilepsy in the regions of Nitra, Žilina and Prešov. The research method used was the questionnaire of own construction. The research results were analysed  $\chi^2$  chi-square test. The research results confirmed that epilepsy has greater impact on mental condition than on physical condition, higher quality of life was found in the patients with better ability to work, the patients who proved better compliance. Quality of life decreased with the length of disease. The membership in EPI association had no significant impact on the quality of life.

**Keywords:** Quality of life, Epilepsy, Ability to work, EPI association

### Introduction

Epilepsy belongs to the most frequent chronic neurological diseases. Annual incidence of all the forms of epileptic seizures is approximately 130 cases per 100 000 inhabitants. Greater incidence is in children than in adults. Prevalence of active epilepsy characterised minimally by one seizure pre last 5 years is approximately 8 – 9 cases per 1000 inhabitants [1].

Quality of life has become the most frequent term in contemporary medicine. It expresses the opinion that healthcare has sense when it positively affects life of patients [2]. This definition of quality of life corresponds with the main goal of complex care of patients with epilepsy which includes minimisation of seizures and simultaneously the best possible wellbeing in the after-seizure period. The evaluation of quality of life is very variable. Nowadays the trend is that a patient, or a group of patients evaluate it themselves. The centre of this evaluation is following of their emotions, opinions, attitudes, and relationship to life-goals, interests, values, life-style and the position in society [3]. These are so called PRO studies (patients reported outcomes- PROs).

Very comprehensible view on quality of life is offered by the dimensions of quality of life according to Fitzpatrick – physical, mental, social, economic dimension and role group functioning. Studies point to the fact that epilepsy to the great extent affects mainly mental dimension of quality of life. More than 80 % patients with epilepsy can suffer from depression, despite that, this problem is often underrated [4]. In the social domain there is recorded the problem of finding and maintaining occupation. Unemployment of people with epilepsy varies according to clinical demonstration, country and education. It also has relationship to the quality of life [5]. Epilepsy also changes the structure of social relationships and functioning in roles. The treatment of epilepsy must be complex – that lies in long-term medical therapy and modification of lifestyle. The condition for maintaining the quality of life of the patient lies in his or her willingness to cooperate.

### Description of the Approach, Methodology and Research materials

The main research goal of the study was to examine the impact of epilepsy on physical, mental, social and economic dimension of quality of life and to discover how it affects the quality of life, compliance of patients, their ability to work, personal qualities and their membership in the association of people with epilepsy (EPI association).

The research method was the questionnaire that contains 4 basic parts: demographic, clinical, social-economical and overall quality of life. We used descriptive analysis and  $\chi^2$  chi-square test.

The research sample consisted of 134 patients with the diagnosis of epilepsy. There were 76 (56 %) - (G40.0) respondents with the diagnosis of idiopathic epilepsy and epileptic syndromes connected with simple partial spasms. Then there were 9 (7 %) (G40.02) respondents with the diagnosis benign psychomotor epilepsy. There also were 31 (24%) – (G40.6) respondents with the diagnosis of non-specific grand seizures and finally there were 17 (13 %) respondents (G41.8) with the diagnosis other epileptic. From the aspect of frequency of epileptic seizures for the last month there were no seizures in 58 (43 %) respondents, one seizure was recorded in 15 (11 %) respondents, twice there was seizure in 33 (25 %) respondents, 11 (8 %) respondents had three seizures in last month, four seizures were in 1 (1 %) respondent, 5 seizures were in 8 (6 %) respondents, 3 (2 %) respondents had seizure six times and 5 (4 %) respondents had seven and more seizures. The duration of the disease was in 23 (17 %) respondents up to 5 years, in 25 (19 %) respondents from 6 to 10 years, in 43 (23 %) respondents from 11 to

20 years, in 21 (16 %) respondents from 21 to 30 years, in 13 (10 %) respondents from 31 to 40 years and in 9 (7 %) respondents from 41 and more years. The research sample consisted from 69 (51 %) men and 65 (49 %) women. The average age of respondents was 40.00. The youngest respondent was 20 years old and the oldest was 76. There were 55 (41 %) employed respondents, 34 (25 %) unemployed respondents, 6 (12 %) disabled retired respondents, 21 (16 %) disabled respondents on partial retirement; 8 (6 %) respondents were retired.

The data collection was realised by means of neurological outpatients in the regions of Žilina, Nitra and Prešov, in the period from June to August 2014.

## Results

### Impact of Epilepsy on Physical and Mental Dimension of Quality of Life

The data were obtained based on the questions about to which extent epilepsy affects respondents during particular physical activities, such as walking on straight ground, stairs, running, working in the garden, bathing, dressing and so on, and the questions aimed at mapping the feelings of respondents during last 4 weeks. Based on the research results of statistical analysis there was confirmed the relationship between studied variables,  $p=0.00 < \alpha=0.05$ . From the table 1 it is obvious that the respondents believed that **the mental condition had greater impact on decreased quality of life than physical condition**. It is also obvious that the least value was in physical burden 2.22 and the lowest value was in the intensity of mental burden 1.56. The paradox is in the fact that maximum value during physical dimension is higher than during mental dimension, however, in this case, the physical dimension was evaluated on the level 3 only by 1 respondent.

*Table 1 Comparison of Physical and Mental Dimension of Quality of Life*

	Average value	Maximum	Minimum
Physical dimension	1.58	3.00	1.00
Mental dimension	1.91	2.22	1.56

### Relationship between the length of disease and quality of life

Based on the research results of statistical analysis there was confirmed the relationship between the investigated variables. In table 2 there is show that the average value of evaluation of quality of life was evaluated by the respondents who suffered with the diagnosis for a shorter period. Those respondents who suffered with the disease for a longer period of time, evaluated it as worse. The exception can be seen during the duration of disease from 16 to 25 years. This fact however did not have any impact on the result of analysis. The research results of statistical analysis indicate that there is **significant relationship between the length of the disease and quality of life** ( $p=0.00$ ).

*Table 2 Evaluation of Quality of Life Considering the Length of the Disease*

The length of disease	Evaluation x
5 and less years	4.04
6-15 years	3.80
16 -25 years	3.09
26-35 years	3.63
36-45 years	3.94
46 and more	3.50

### The Relationship between the Ability to Work vs. Quality of life

We analysed the quality of life such as (the worst-1, the best- 10) and the ability to work (the worst-1, the best-10) in the 4 life periods, nowadays in the period of disease diagnostics, then in the period without the disease and when the respondent felt healthy. The results of statistical analysis are shown in the table 3. The value  $p=0.00$  is in the case of analysis of contemporary ability to work and quality of life, the ability to work and quality of life in the time of diagnosed disease and also in the case of the ability to work and quality of life in perfect health condition – the significance  $\alpha =0.05$  and lower than  $\alpha = 0.01$ . This indicates that **quality of life significantly relates to the ability work**. The ability to work and quality of life without the disease was confirmed on the significance of 0.05.

**Table 3** Relationship to work and quality of life

	p- value	Alfa	Comparison
<b>Present ability to work and QoL</b>	0.000		$p < \alpha$
<b>Ability to work and QoL in the period of diagnosed disease</b>	0.000	0,05	$p < \alpha$
<b>Ability to work and QoL without disease</b>	0.029		$p < \alpha$
<b>Ability to work and QoL in perfect health condition</b>	0.000		$p < \alpha$

From table 2 we can see that higher ability to work causes increased quality of life in respondents.

**Table 4** Evaluation of Quality of Life in Relationship to Evaluation of the Ability to Work

		Average value
<b>Present</b>	Quality of life	3.88
	Ability to work	2.31
<b>Diagnostics</b>	Quality of life	2.83
	Ability to work	5.06
<b>Without the disease</b>	Quality of life	7.95
	Ability to work	7.54
<b>Perfect health condition</b>	Quality of life	9.37
	Ability to work	8.33

#### Relationship between personal qualities of respondents vs. quality of life

From table 5 it is obvious that personal qualities did not have impact on the evaluation of quality of life in the time of disease. The respondents with perfect health condition more often considered themselves as optimists and in the time of diagnosed disease they perceived themselves as pessimists.

**Table 5** The Relationship between Quality of life and Personal Qualities

	p- value	Alfa
<b>Present QoL</b>	0.000	$p < \alpha$
<b>QoL in the time of diagnosed disease</b>	0.456	$p > \alpha$
<b>QoL without disease</b>	0.000	$p < \alpha$
<b>QoL in perfect health condition</b>	0.000	$p < \alpha$

#### The relationship between the EPI association membership vs. quality of life

From table 6 it is clear that the value p ( $p=0.621$ ) is greater than the selected significance (0.05). Based on this inequality ( $p=0.621 > \alpha=0.05$ ) we accept that there is not significance between number / frequency in the answers. It means that quality of life is not variously evaluated considering whether the respondent is or is not the member of EPI association. We thus can conclude that **EPI association membership does not have any impact on the evaluation of quality of life.**

**Table 6** Relationship Quality of Life and EPI Association Membership

p-value	Alfa	Comparison
0.621	0.05	$p > \alpha$

### Relationship Compliance vs. quality of life

Based on the results of statistical analysis there was confirmed the relationship between the variables co-operation and quality of life. There was confirmed that **the better the patient co-operates (the higher compliance s/he has) the better he or she evaluates quality of life (tab7).**

*Table 7 The Relationship between Quality of life and Compliance*

p-value	Alfa	Comparison
0.00	0.01	$p < \alpha$
0.00	0.01	$p < \alpha$

### Conclusion

The research results confirmed that the epilepsy affects quality of life in all her dimensions, but in various degree. Epilepsy affects quality of life depending on the number of seizures. Quality of life is decreased by partial and also generalised seizures [6,9].

In the physical dimension the greatest restriction of the disease is seen in demanding physical activities such as running (jogging) and the least restriction is in self-care, such as shopping. In our study there was prevalent fatigue, lack of good mood and mood disorders. The other studies confirm our results [7]. Piperidou believes that the disease affected mainly energy and this is connected with the other dimensions, chiefly social life. Shetty says that with the duration of the disease decreases subjective evaluation of quality of life [8, 9]. Ability to work and employment has the biggest positive impact on the quality of life especially appropriately selected job which is perceived meaningful to the respondent and the job which does not have negative impact on the number of seizures and mental condition of the respondent [10, 11]. To adapt to the disease various associations can be helpful. Our study however refers to the fact that between EPI association membership and quality of life there does not exist significance. This might result in the professional activity in this association, good management and others [12].

In the present the situation of patients much improved in comparison to the past. However, patients in the present time still fight against stigmatisation of epilepsy, reluctance of public, chiefly of employers.

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