

Influence of Marital Status on the Quality of Life of Chinese Adult Patients with Epilepsy

Fu-Li Wang¹, Xiang-Min Gu², Bao-Yun Hao², Shan Wang³, Ze-Jie Chen³, Cheng-Yun Ding³

¹Department of Hospital Management, First Affiliated Hospital, General Hospital of People's Liberation Army, Beijing 100048, China

²Department of Programmed Immunization, Center for Disease Control and Prevention of Tianjin Binhai New Area, Tianjin 300450, China

³Department of Epilepsy, First Affiliated Hospital, General Hospital of People's Liberation Army, Beijing 100048, China

Abstract

Background: Epilepsy is a chronic disorder characterized by recurrent seizures and has significant psychological and social consequence for everyday living. Epilepsy affects various aspects of ones' social life. The present study aimed to investigate the influence of marital status on the quality of life of adult Chinese patients with epilepsy.

Methods: This study surveyed 805 Chinese adults who have been clinically diagnosed with epilepsy for longer than 1 year in 11 hospitals in Beijing. In this survey, 532 (66.1%) participants were married. All of them completed the case report form with enquiries on demographic data, social factors, and illness. The marriage status of adult epileptic quality of life was the dependent variable, and demographic data and clinical data were independent variables, analyzed through the multiple linear regression analysis methods. The patients' quality of life was assessed using the Quality of Life in patients with Epilepsy-31 items (QOLIE-31) questionnaire, the Patient Health Questionnaire-9 items (PHQ-9), and the Generalized Anxiety Disorder-7 items (GAD-7).

Results: The PHQ-9 and GAD-7 scores in the unmarried group (PHQ-9 = 6.0 and GAD-7 = 5.0) were significantly higher than that of the married group (PHQ-9 = 4.0 and GAD-7 = 3.0). The scores of married adult patients with epilepsy on QOLIE (61.8 ± 15.3) and social function (70.9 ± 22.7) were higher than the scores of the unmarried patients aged between 20 and 44 years. The scores of married adult epileptics on the QOLIE (58.4 ± 14.6) and the energy/fatigue (62.1 ± 20.4) were higher than the scores of the unmarried patients (QOLIE = 58.4 ± 14.6 and the energy/fatigue = 62.1 ± 20.4) aged between 45 and 59 years. For the adult epilepsy patients, depression, anxiety, seizures within the last year, disease course, medical expense category, and marriage* age are negatively correlated with the quality of life. Occupation, educational level, and average monthly income are closely related to the quality of life.

Conclusions: Married adult epileptic patients have better quality of life than that of unmarried adult patients in young and middle-aged age groups. Unmarried adult patients with epilepsy are more anxious and depressed than married adult patients.

Key words: Adults; Epilepsy; Marital Status; Quality of Life

INTRODUCTION

Epilepsy is a chronic neurological disorder affecting about 50 million people worldwide, with nearly 80% of epilepsy occurring in developing countries.^[1] Although primary clinical treatment goals are focused on the physical complications of epilepsy through seizure control, patients with epilepsy face many other challenges, including psychological difficulties (e.g., lower self-esteem, depression, and anxiety) and social complications (e.g., driving restrictions, unemployment, and social isolation).^[2-5] It is generally agreed that people with epilepsy are less likely to marry and more likely to divorce than the general population.^[6-8] Although epilepsy impacts various social aspects, marriage is a primary source

of social support and a predictor of health status.^[9] Previous studies also suggest that married persons report better psychological and physical health compared to those who are not married.^[10] However, studies on adults with epilepsy in China seldom focus on the effects of marital status on

Address for correspondence: Dr. Cheng-Yun Ding,
Department of Epilepsy, First Affiliated Hospital,
General Hospital of People's Liberation Army, Beijing 100048, China
E-Mail: chengyun_ding@163.com

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

© 2017 Chinese Medical Journal | Produced by Wolters Kluwer - Medknow

Received: 15-08-2016 **Edited by:** Yi Cui
How to cite this article: Wang FL, Gu XM, Hao BY, Wang S, Chen ZJ, Ding CY. Influence of Marital Status on the Quality of Life of Chinese Adult Patients with Epilepsy. Chin Med J 2017;130:83-7.

Access this article online

Quick Response Code:



Website:
www.cmj.org

DOI:
10.4103/0366-6999.196572

the patients' quality of life. This study explored the effects of marital status on the quality of life of adult epileptics in China. It aimed to provide an objective basis for the possible relationship between marital status and the quality of life for patients with epilepsy.

METHODS

A total of 11 professional epilepsy centers or neurological clinics were selected in Beijing. Patients diagnosed with epilepsy were recruited from the neurology departments of these hospitals. The inclusion criteria were as follows: (1) diagnosis of epilepsy based on the 2014 International League against Epilepsy for longer than 1 year; (2) in accordance with the China's Marriage Law, men must be aged 22 years and women aged 20 years to get married, so patients below this age were excluded from the study; (3) educational level higher than primary school; (4) patients gave signed informed consent. The exclusion criteria were as follows: (1) progression of central nervous system (CNS) disease or acute stage and other severe chronic CNS diseases; (2) disturbance of consciousness, cognitive impairment, and language dysfunction; (3) seizure occurrence of more than once within 72 h of screening; (5) history of schizophrenia; (6) history of cranial surgery; and (7) history of drug abuse.

On the basis of the inclusion and exclusion criteria, qualified investigators surveyed 805 adults with epilepsy diagnosed in the neurology departments of 11 public hospitals around Beijing. The Quality of Life in Epilepsy-31 (QOLIE-31)^[11,12] is a health-related quality of life survey for adults (men ≥ 22 years, women ≥ 20 years) with epilepsy. This scale contains domains that include seven subscales: overall quality of life, seizure worry, emotional well-being, cognitive function, energy/fatigue, medication effects, and social function, derived from the QOLIE-89. The responses yield seven individual scores (per subtest) with a total (composite) score. The raw scores were then rescaled from 0 to 100, with higher values indicating better QOLIE-31 scores. The survey was conducted by trained researchers on adult patients with epilepsy. The questionnaire contained questions on patient-related information and the QOLIE-31 scale (Chinese version). The Patient Health Questionnaire-9 items (PHQ-9) based on "the *Diagnostic and Statistical Manual of Mental Illness (4th Edition)*" of depression is a standard written into 9-item of the self-assessment tool and is considered a basic tool of choice for checking depression.^[13] The questionnaire score values range from 0 to 27 points and scores are 5, 10, 15, and 20 which correspond to the representative of mild, moderate, moderately severe, and severe depression boundaries, respectively. The Generalized Anxiety Disorder-7 items (GAD-7) was developed in the USA as a valuable screening tool for detecting GAD in primary care patients, and the total score ranges from 0 to 21 points.^[14] The scores were 5, 10, and 15 which correspond for mild, moderate, and severe degrees of anxiety, respectively.

Statistical analysis

Data were inputted using EpiData 3.0 (The EpiData Association, Odense Denmark, 2003) and analyzed using SPSS 23.0 (IBM, Chicago, IL, USA) software. The two sample means were compared using the *t*-test (or rank-sum test). Qualitative data were analyzed using the Chi-square test. Three sets of measurement data were compared using analysis of variance (or rank sum test), and multiple comparisons were conducted using the Bonferroni correction. The relationship between the quality of life and other factors uses multivariate linear regression analysis. $P \leq 0.05$ was considered statistically significant.

RESULTS

On the basis of the inclusion and exclusion criteria, 805 adult patients with epilepsy were enrolled in the present study. Among these patients, 478 (59.4%) were male and 327 (40.6%) were female. The average age was 37.03 ± 13.15 (range 20–80 years) years. Two hundred and forty-five (30.4%) patients were single, and 532 (66.1%) were married. A total of 493 (61.2%) individuals held educational diplomas at high school level or higher. Three-hundred and nine (38.4%) patients received an average household income of $\geq \text{¥}5000$ per month over the past year. A total of 535 patients were employed.

A total of 676 (84.0%) individuals received treatment from a specialist, and 582 (72.3%) patients experienced seizures over the past year. The average age at which the patients suffered their first seizure episode was 21.74 ± 14.97 years (range 0–79 years). The mean disease duration was 15.35 ± 13.44 years (range 0–78 years). A total of 448 (55.7%) patients reported good compliance with epilepsy medication [Table 1].

Unmarried adult epilepsy patients with anxiety and depression scores (5.00 and 6.00) are higher than married adult epilepsy patients with anxiety and depression scores (3.00 and 4.00). It is shown that adults with epilepsy of anxiety and depression after marriage decline [Table 2].

To compare marital status on the quality of life of adult epileptics in different ages, groups were assigned in accordance with the UN's WHO guidelines as follows: aged 44 years or younger were classified as young; aged 45–59 years were classified as middle-aged; and 60 years or older were classified as elderly. The scores of married adult patients with epilepsy (336 patients) on QOLIE and social function were higher than the scores of the unmarried adult patients with epilepsy (194 patients) between ages 20 and 44 years. The scores of married adult patients with epilepsy (143 patients) on QOLIE and energy/fatigue were higher than the scores of the unmarried patients (45 patients) between ages 45 and 59 years. It is shown that the married adult patients with epilepsy have a better life quality than unmarried patients [Table 3].

As shown in Figure 1, it is no matter which age groups of married adult epilepsy patient's quality of life scores higher

Table 1: Comparison of demographic and disease data between the different marital status

Variables	Married (n = 532)	Unmarried (n = 273)	t/ χ^2	P
Gender, n (%)				
Men	314 (65.7)	164 (34.3)	0.083	0.774
Women	218 (66.7)	109 (33.3)		
Age, mean \pm SD (years)	41.50 \pm 12.34	29.16 \pm 10.57	14.528*	0.000
Education, n (%)				
Under high school	201 (64.4)	111 (35.6)	0.629	0.428
High school or higher	331 (67.1)	162 (32.9)		
Employment, n (%)				
Yes	368 (68.8)	167 (31.2)	5.181	0.023
No	164 (60.7)	106 (39.3)		
Average monthly income (¥), n (%)				
<5000	319 (64.3)	177 (35.7)	1.811	0.193
\geq 5000	213 (68.9)	96 (31.1)		
Diagnosis, n (%)				
Special medication	443 (65.5)	233 (34.5)	0.579	0.447
General medication	89 (69.0)	40 (31.0)		
Medical expenses categories, n (%)				
Own expense	178 (57.2)	133 (42.8)	17.720	0.000
Medical insurance	354 (71.7)	140 (28.3)		
Age of onset, mean \pm SD (years)	25.94 \pm 15.68	14.24 \pm 9.87	11.645*	0.000
Disease course, mean \pm SD (months)	15.59 \pm 13.97	13.73 \pm 11.77	2.082*	0.038
Seizure in 1 year, n (%)				
Yes	386 (66.3)	196 (33.7)	0.052	0.868
No	146 (65.5)	77 (34.5)		
Medication compliance, n (%)				
Yes	274 (61.2)	174 (38.8)	10.938	0.001
No	258 (72.3)	99 (27.7)		

SD: Standard deviation. **t* values.

Table 2: Anxiety and depression in married and unmarried adult patients with epilepsy, Median (Q1–Q3)

Item	Anxiety	Depression
Married	3.00 (0.00–7.00)	4.00 (1.00–9.00)
Unmarried	5.00 (0.00–9.00)*	6.00 (2.00–10.00)*

**P*<0.05, †*P*<0.01 between married and unmarried. Q1–Q3: Quality 1–Quality 3.

than unmarried adult epilepsy patient's quality of life. The results shows that marriages may be factors affecting the quality of life [Figure 1].

Multiple linear regression analysis

All the adult epilepsy patients' quality of life was a dependent variable and gender, age, education level (under high school, high school, or higher), the diagnosis and treatment, occupation (yes or no), family economic conditions, average monthly income, medical expense category, age of onset, seizure in 1 year (yes or no), disease course

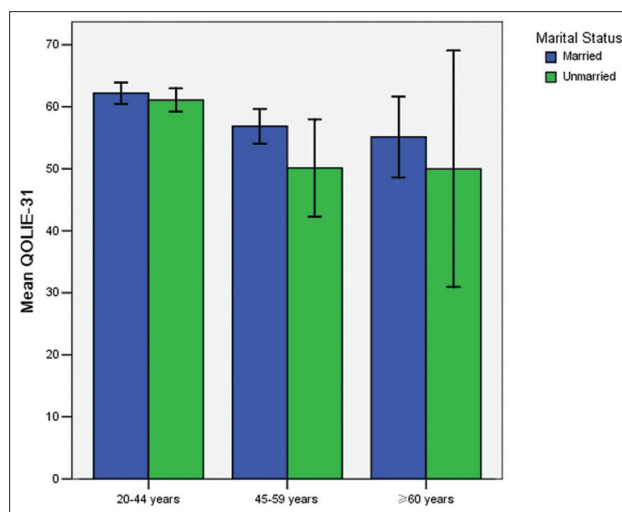


Figure 1: Diverse marital status contrast trend of quality of life under the different ages.

(months), medication compliance, anxiety, and depression were independent variables. The inclusion criteria is 0.05, excluding standard is 0.05, since age and marriage have interaction, $R^2 = 0.522$. Depression, anxiety, seizure in 1 year, course, medical expense category, and age* marriage are negative correlated with the quality of life. Occupation, education level, and average monthly income are closely related to the quality of life [Table 4].

DISCUSSION

Social support is defined as the perception that an individual is a member of a network, in which one can give and receive help, affection, and obligation. Social support can be received from family members, friends, colleagues, as well as medical personnel.^[15] Marital status is an additional factor of social support. Greater social support has been linked to better quality of life in patients with chronic diseases. The present study demonstrated no significant difference in gender, level of education, income, type of diagnosis, or seizure occurrence for the past year ($P > 0.05$) among patients with different marital status. However, patients' marital status significantly differed in age, employment, medical expenses, age of onset, and disease course ($P < 0.05$). Compared with unmarried adult patients with epilepsy, married adult patients demonstrate higher employment status and the longer course of disease. Since marriage helps foster a sense of meaning, promotes healthy behaviors, reduces risk factors, and enhances adherence to medical regimens,^[16] married adult patients with epilepsy have better medication compliance than the nonmarried subgroup. Emotional support received from family members has been found to have positive effects on mental health, family cohesion, and marriage quality.^[16] This suggests that marriage is important for patients with epilepsy.

Previous studies have found that compared with the general population, people with epilepsy are much more likely to report symptoms of depression and anxiety.^[17] Marriage, as a specific source of social support, may increase one's

Table 3: Comparison of the quality of life in married and unmarried adult patients with epilepsy

Variable	20–44 years		45–59 years		≥60 years	
	Married (n = 336)	Unmarried (n = 194)	Married (n = 143)	Unmarried (n = 45)	Married (n = 53)	Unmarried (n = 34)
Overall quality of life	35.11 ± 10.34	33.66 ± 10.62	33.57 ± 9.39	29.92 ± 13.29	30.64 ± 10.83	23.56 ± 9.25
Energy/fatigue	65.45 ± 18.83	64.47 ± 20.66	62.09 ± 20.42	51.60 ± 21.83*	60.64 ± 20.44	45.56 ± 13.33*
Emotional wellbeing	67.00 ± 18.42	64.56 ± 18.63	64.72 ± 19.20	58.40 ± 20.91	60.67 ± 20.97	53.78 ± 9.61
Seizure worry	50.64 ± 25.64	50.04 ± 27.22	48.40 ± 25.80	51.85 ± 26.04	48.60 ± 25.06	56.70 ± 19.27
Cognition	68.16 ± 19.52	65.78 ± 21.84	60.97 ± 17.96	53.38 ± 21.24	56.99 ± 22.16	54.14 ± 20.72
Social function	70.86 ± 22.66	65.95 ± 23.22*	65.18 ± 21.89	56.04 ± 23.79	62.24 ± 20.99	55.88 ± 11.02
Medication effects	53.12 ± 25.62	49.15 ± 25.53	51.04 ± 25.24	51.44 ± 27.43	49.63 ± 27.39	43.82 ± 18.98
QOLIE31	61.75 ± 15.26	59.22 ± 16.09*	58.42 ± 14.55	51.02 ± 17.69*	54.14 ± 16.65	49.03 ± 11.41

Values are expressed as the mean ± SD. **P*<0.05 between married and unmarried. QOLIE-31: Quality of Life in Epilepsy-31; SD: Standard deviation.

Table 4: Adult patients with epilepsy of multiple linear regression analysis

Items	B	SE	t	P
Intercept	77.33	2.75	28.15	<0.0001
Occupation	3.25	0.92	3.55	0.0004
Education level	2.11	0.92	2.29	0.0223
Average monthly income	1.85	0.85	2.18	0.0298
Medical expense category	-2.15	0.83	-2.59	0.0097
Seizure in 1 year	-4.53	0.88	-5.12	<0.0001
Disease course	-0.14	0.03	-4.07	<0.0001
Anxiety	-1.00	0.11	-9.20	<0.0001
Depression	-0.84	0.10	-8.00	<0.0001
Age* marriage	-0.04	0.01	-3.21	0.0014

SE: Standard error. *: There are interaction between the two factors.

ability to cope, either because of coping assistance or because marriage enhances one's own coping capacity.^[18] Anxiety and depression have been associated with poor quality of life of person with epilepsy. Marriage can help people cope psychologically with economic or social problems when they occur and provide economic resources that may have a moderating effect on concerns about medical costs. Marriage and family are major sources of social support and predictors of health of patients with chronic diseases.^[19] Unmarried adult patients with epilepsy of anxiety and depression scored higher in PHQ-9 and GAD-7 than married patients. Regardless of marital status, we should use psychological counseling and drug intervention to reduce the patients' feeling of depression and anxiety.

In accordance with the UN's world health organization's age definition, three different age groups were assessed in terms of their effect on the quality of life of adult patients with epilepsy. Some studies have found that family support contributed significantly to QOLIE-89 of person with epilepsy and patients' QOLIE-89 also depended on the QOLIE-89 of the family members,^[20] suggesting a strong association between social support and QOLIE-89 in both patients with epilepsy and their family members. Family functioning and marriage may be an important treatment target to enhance coping in person with epilepsy. Patients

with epilepsy who are unmarried have significantly less economic resources to cope with their condition. Married adult patients with epilepsy have better quality of life than unmarried adult patients in young (20–44 years) and middle-aged (45–59 years) stages. Hence, marriage may result in a significant enhancement in their quality of life.

For the adult epilepsy patients, depression, anxiety, seizures within 1 year, disease course, medical expense category, and age* marriage are negatively correlated with the quality of life. Occupation, education level, and average monthly income are closely related to the quality of life. In epilepsy, it is important to recognize the psychosocial and emotional aspects that affect marital status and to reduce its negative impact on QOL and to help improve the treatment and counseling of these individuals.^[21] There is differing opinions within the literature regarding the association between lower QOL scores and sociodemographic factors, such as marital status.^[22] Other studies have indicated that marital status in person with epilepsy has been associated with lower QOL.^[8] This study showed that married adult patients with epilepsy have a better life than unmarried patients in different ages possibly due to age and marriage having interactions. By psychological counseling and clinical drug intervention measures, we hope to improve the adult epilepsy patients on the quality of life in all ages of marriage. For instance, we can encourage adult patients with epilepsy to seek a job^[23] and improve their education level to enhance their quality of life.

In this study, married adult epileptic patients demonstrated a better quality of life than unmarried adult patients in young and middle-aged stage. Unmarried adult patients with epilepsy were more anxious and depressed than married adult patients. On the marriage, the families still object to their children marrying patients with epilepsy, even those with controlled epileptic seizures, because of the belief that patients with epilepsy will pass the illness to their children or patients with epilepsy may not fulfill their social and economic roles and obligations.^[21] Some researches showed that married patients with epilepsy have better QOL than those who are not married,^[24] and that better marital adjustment is positively associated with better perception

of QOL in married patients with epilepsy.^[25] However, the present study was a cross-sectional study with no follow-up for the quality of life of Chinese adult patients with epilepsy in different marital status. These results appeared to reflect differences in social and clinical roles between married and unmarried adult patients with epilepsy. However, in the future, factors such as recent changes in lifestyle and concepts of marriage will influence these differences.

Acknowledgments

The authors would like to thank all the individuals in China who offered their time and energy to participate in the interviews. They are also grateful to the staff who contributed to the project and the Beijing Association against Epilepsy.

Financial support and sponsorship

The project was funded by the Beijing Municipal Commission of Education (No. KZ201110025030).

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Mac TL, Tran DS, Quet F, Odermatt P, Preux PM, Tan CT. Epidemiology, aetiology, and clinical management of epilepsy in Asia: A systematic review. *Lancet Neurol* 2007;6:533-43. doi: 10.1016/S1474-4422(07)70127-8.
- Mehndiratta P, Sajatovic M. Treatments for patients with comorbid epilepsy and depression: A systematic literature review. *Epilepsy Behav* 2013;28:36-40. doi: 10.1016/j.yebeh.2013.03.029.
- Rudzinski LA, Meador KJ. Epilepsy and neuropsychological comorbidities. *Continuum (Minneapolis Minn)* 2013;19:682-96. doi: 10.1212/01.CON.0000431382.06438.cd.
- de Lima C, de Lira CA, Arida RM, Andersen ML, Matos G, de Figueiredo Ferreira Guilhoto LM, *et al.* Association between leisure time, physical activity, and mood disorder levels in individuals with epilepsy. *Epilepsy Behav* 2013;28:47-51. doi: 10.1016/j.yebeh.2013.03.016.
- Funderburk JA, McCormick BP, Austin JK. Does attitude toward epilepsy mediate the relationship between perceived stigma and mental health outcomes in children with epilepsy? *Epilepsy Behav* 2007;11:71-6. doi: 10.1016/j.yebeh.2007.04.006.
- Kim MK, Kwon OY, Cho YW, Kim Y, Kim SE, Kim HW, *et al.* Marital status of people with epilepsy in Korea. *Seizure* 2010;19:573-9. doi: 10.1016/j.seizure.2010.09.006.
- Agarwal P, Mehndiratta MM, Antony AR, Kumar N, Dwivedi RN, Sharma P, *et al.* Epilepsy in India: Nuptiality behaviour and fertility. *Seizure* 2006;15:409-15. doi: 10.1016/j.seizure.2006.04.005.
- Wada K, Kawata Y, Murakami T, Kamata A, Zhu G, Mizuno K, *et al.* Sociomedical aspects of epileptic patients: Their employment and marital status. *Psychiatry Clin Neurosci* 2001;55:141-6. doi: 10.1046/j.1440-1819.2001.00802.x.
- Cutrona CE. Social Support in Couples: Marriage as a Resource in Times of Stress. London: SAGE Publications: Sage Publications, Inc.; 1996.
- Kiecolt-Glaser JK, Newton TL. Marriage and health: His and hers. *Psychol Bull* 2001;127:472-503. doi: 10.1037/0033-2909.127.4.472.
- Devinsky O, Vickrey BG, Cramer J, Perrine K, Hermann B, Meador K, *et al.* Development of the quality of life in epilepsy inventory. *Epilepsia* 1995;36:1089-104. doi:10.1111/j.1528-1157.1995.tb00467.x.
- Cramer JA, Arrigo C, Van Hammée G, Bromfield EB. Comparison between the QOLIE-31 and derived QOLIE-10 in a clinical trial of levetiracetam. *Epilepsy Res* 2000;41:29-38. doi:10.1016/S0920-1211(00)00127-3.
- Kroenke K, Spitzer RL, Williams JB. The PHQ-9: Validity of a brief depression severity measure. *J Gen Intern Med* 2001;16:606-13. doi: 10.1046/j.1525-1497.2001.016009606.x.
- Spitzer RL, Kroenke K, Williams JB, Löwe B. A brief measure for assessing generalized anxiety disorder: The GAD-7. *Arch Intern Med* 2006;166:1092-7. doi: 10.1001/archinte.166.10.1092.
- Folkman S. Personal control and stress and coping processes: A theoretical analysis. *J Pers Soc Psychol* 1984;46:839-52.
- Jiang H, Wang L, Zhang Q, Liu DX, Ding J, Lei Z, *et al.* Family functioning, marital satisfaction and social support in hemodialysis patients and their spouses. *Stress Health* 2015;31:166-74. doi: 10.1002/smi.2541.
- LaFrance WC Jr., Alosco ML, Davis JD, Tremont G, Ryan CE, Keitner GI, *et al.* Impact of family functioning on quality of life in patients with psychogenic nonepileptic seizures versus epilepsy. *Epilepsia* 2011;52:292-300. doi: 10.1111/j.1528-1167.2010.02765.x.
- Elliott JO, Charyton C, McAuley JW, Shneker BF. The impact of marital status on epilepsy-related health concerns. *Epilepsy Res* 2011;95:200-6. doi: 10.1016/j.epilepsyres.2011.03.016.
- Chen J, Zhang Y, Hong Z, Sander JW, Zhou D. Marital adjustment for patients with epilepsy in China. *Epilepsy Behav* 2013;28:99-103. doi: 10.1016/j.yebeh.2013.03.027.
- Mahrer-Imhof R, Jaggi S, Bonomo A, Hediger H, Eggenschwiler P, Krämer G, *et al.* Quality of life in adult patients with epilepsy and their family members. *Seizure* 2013;22:128-35. doi: 10.1016/j.seizure.2012.11.012.
- Tedrus GM, Fonseca LC, Pereira RB. Marital status of patients with epilepsy: Factors and quality of life. *Seizure* 2015;27:66-70. doi: 10.1016/j.seizure.2015.02.028.
- Tedrus GM, Fonseca LC, Carvalho RM. Epilepsy and quality of life: socio-demographic and clinical aspects, and psychiatric co-morbidity. *Arq Neuropsiquiatr* 2013;71:385-91. doi: 10.1590/0004-282X20130044.
- Gu XM, Ding CY, Wang N, Xu CF, Chen ZJ, Wang Q, *et al.* Influence of Occupational status on the quality of life of chinese adult patients with epilepsy. *Chin Med J* 2016;129:1285-90. doi: 10.4103/0366-6999.182827.
- Zhao Y, Wu H, Li J, Dong Y, Liang J, Zhu J, *et al.* Quality of life and related factors in adult patients with epilepsy in China. *Epilepsy Behav* 2011;22:376-9. doi: 10.1016/j.yebeh.2011.07.025.
- Elliott JO, Charyton C, Sprangers P, Lu B, Moore JL. The impact of marriage and social support on persons with active epilepsy. *Epilepsy Behav* 2011;20:533-8. doi: 10.1016/j.yebeh.2011.01.013.