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Marital adjustment for patients with epilepsy in China

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ABSTRACT

Marriage is a major source of social support and a predictor of health; however, marriages that involve people with epilepsy are more likely to fail. To explore this issue in China, we compared the marital adjustment of patients with epilepsy to control subjects using the Dyadic Adjustment Scale (DAS). A total of 136 married persons with epilepsy and 145 healthy control subjects were recruited. The DAS score was significantly lower in people with active epilepsy than in the controls (102.0 ± 17.8 vs. 109.2 ± 15.8, $p < 0.001$). A hierarchical regression showed that depression and social support satisfaction were significant predictors for DAS. Psychosocial variables accounted for 24.0% of the variance in DAS after control for demographic and seizure-related factors in patients with active epilepsy. The result suggests that people with active epilepsy in our sample encountered more marital discord than controls. Treatment to control mood disorder and support intervention might be important for their marital adjustment.

1. Introduction

The marital relationship is a primary source of social support and a predictor of health status [1,2]. Spouses are the primary caregivers of married patients with epilepsy [3]; however, marital problems have long been an issue in this group. Epilepsy has been associated with a reduced likelihood of getting married. Higher divorce rates have been recorded for persons with epilepsy (PWE) [4–6]. Marital adjustment is a measure of marriage quality and is defined as the accommodation between couples at a given time. A low marital adjustment is associated with divorce [7]. Studies from different countries report that the marriage rate for PWEs varies between 46% and 83% [4,8]. Approximately 9 million people have epilepsy in China, and a large number of them are married [9]. However, little is known about the effects of epilepsy on marital adjustment and marriage quality or the epilepsy-related factors associated with marital adjustment. PWE couples may face medical, social and economic stresses, which may result in low marital adjustment. This situation is especially true in China, where 50% of parents do not want their children to marry a PWE [10]. Thus, we conducted a cross-sectional study comparing the marital adjustment of PWEs with that of healthy controls and explored the factors associated with this adjustment.

2. Methods

2.1. Study setting and procedures

This cross-sectional and hospital-based study took place in Chengdu, a city in southwest China with more than 14 million inhabitants. Between May and October 2012, all married patients attending an epilepsy outpatient clinic were invited to participate. Criteria for inclusion were as follows:

1. One person in the couple had a validated diagnosis of epilepsy.
2. The patient was over 18 years of age and married.
3. The patient was able to communicate clearly and had completed at least primary education.

Other serious medical illnesses may also affect marital adjustment [11,12]. Thus, patients were excluded if their epilepsy was previously diagnosed as another major condition, such as a stroke, cancer, physical disability, significant intellectual disability, schizophrenia, being pregnant or another condition that may affect marital adjustment.

We recruited our controls in an urban neighborhood near our hospital and a rural community near Chengdu City. We first put up posters and recruited volunteers. Once a married PWE was identified, we contacted the volunteer of the same gender, age (plus or minus

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2 years), same education level and similar location (urban or rural) to perform a face to face interview. Controls were excluded if they met any of the following criteria:

1. Unmarried.
2. Presence of a known condition, such as epilepsy, stroke, cancer, physical disability, significant intellectual disability, schizophrenia, pregnancy or another condition that may affect marital adjustment.

After the subjects signed the informed consent, the eligible patients were brought to a quiet room for an interview. The semi-structured psychosocial interview required 20–30 min to complete. All interviews were conducted face-to-face by the first and second authors.

2.2. Clinical information and socio-demographic status

Clinical information from the PWE was obtained from medical records. Active epilepsy was defined as the occurrence of unprovoked seizures in the past 12 months. Seizure severity was assessed using the National Hospital Seizure Severity Scale (NHS3) [13].

Information on demographics, such as age, gender, educational levels, occupational status, family income, the duration of marriage, the number of children, marriage before or after the disease and whether the disease was concealed before marriage, were obtained during the interview.

2.3. Instrument

The Dyadic Adjustment Scale (DAS), one of the most widely used scales for measuring relationship satisfaction, was used with authorization from the copyright holder (MHS, Inc). This scale consists of 32 items in four domains: dyadic consensus, dyadic satisfaction, affectional expression and dyadic cohesion. The validity of the Chinese version of the DAS has been established [14,15].

The Social Support Rating Scale (SSRS) was originally developed in Chinese and was used to assess the perceived rate of social support that was received by patients with epilepsy. This scale contains 10 items for the evaluation of social support in three domains: subjective support, objective support and availability of support [16].

Support satisfaction: One question (How satisfied are you with the support you receive?) was added to assess the satisfaction of the support that the patient received using a 5-point rating scale (very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, and very dissatisfied).

The Hospital Anxiety and Depression Scale (HADS) was used to quickly screen the anxiety and depression symptoms in both the patients with epilepsy and the control subjects. This scale consists of seven items for anxiety and seven items for depression [17]. The validity of this scale has been established in the Chinese population [18,19]. We used cut-off points of 8 for anxiety and 8 for depression.

The quality of life in epilepsy-31 (QOLIE-31) was used to assess the quality of life of PWE. The Chinese version of the scale has been previously established [20,21].

2.4. Sample size estimation

For a *t*-test between two independent groups with 7 between-group DAS differences and an SD of 15, to achieve a statistical power of 80% and a two-tailed 95% significance level, each group required a minimum of 73 subjects.

2.5. Ethical aspects

The study was approved by the Ethics Committee of West China Hospital, Sichuan University. All participants were informed of the purpose of the study and written informed consent was obtained from all the participants. The subjects' anonymity was guaranteed. Informed consent forms and questionnaires were separated in two envelopes.

2.6. Data analysis

Descriptive statistics of the married patients and controls were conducted. Quantitative data are expressed as the mean ± SD. Qualitative data were summarized as proportions. A comparison of demographic, psychosocial data and DAS scores between the control group and the married patients was conducted. Student's *t*-tests were used for continuous variables. Chi-square tests were used for categorical variables. Correlation analyses were performed to examine various factors that may be associated with marital adjustment in patients with epilepsy. Pearson's correlations were used for continuous variables. Spearman correlations were used for ordinal variables. Next, a hierarchical regression was carried out to find predictors for the total DAS score of the patients with active epilepsy. The disease-related variables and the variables that are associated with marital adjustment according to previous studies [22] were chosen as independent variables. In the first model (step 1), a set of demographic variables (gender, years married, number of children, employment and family income) were entered. Then, seizure-related variables (onset age of the disease, NHS3, seizure frequency, number of AEDs and seizure type) were added in the second model (step 2). Then in the third model (step 3), support and psychological variables (HADS anxiety score, HADS depression score, SSRS and social support satisfaction) were put in. The impact of different sets of variables on marital adjustment was examined by the improvement in R^2. All of the analyses were processed using SPSS 15.0 (SPSS Inc., Chicago, Illinois).

All of the tests were two-tailed, and p values less than 0.05 were considered to be statistically significant.

3. Results

3.1. Clinical and demographic data of the participants

A total of 160 PWEs were consecutively approached, and 148 married patients agreed to participate. Of them, 5 were pregnant, 3 had significant intellectual disability, and 4 generated invalid scores; these subjects were not included.

A total of 136 married patients, and 145 controls completed the study. Among the married patients, 68 (50%) were male, 68 (50%) were female, 39 (28.7%) were from the rural area and 97 (71.3%) were from the urban area. The average age of married patients was 35.2 ± 10.7. The average year of education was 11.4 ± 3.8. Among the controls, 77 (54.1%) were male, 67 (45.9%) were female, 37 (25.5%) were from the rural area and 108 (74.5%) were from the urban area. The average age of controls was 35.3 ± 10.6. The average year of education was 11.7 ± 3.

Table 1 provides the clinical details of the PWE. The average NHS3 seizure severity score of the 99 subjects who had active epilepsy was 13.3 ± 7.0. Table 2 shows the between-group comparison of the demographic characteristics of the married patients and controls; patients were less likely to be employed ($p < 0.001$) and had fewer children ($p < 0.001$). No differences were detected for the other demographic variables.

3.2. Marital quality in controls and patients with epilepsy

Table 3 shows the between-group comparison of the self-assessment scale scores. The total DAS scores rated by those who had active epilepsy ($n = 99$ 102.0 ± 17.8) were lower than those of controls ($n = 145$ 109.2 ± 15.8, $p < 0.001$). The total DAS scores rated by PWE with non-active epilepsy ($n = 37$ 108.0 ± 20.9) were not significantly different than the scores rated by the control group ($n = 145$ 109.2 ± 15.8, $p = 0.694$).