

## Research Article

# Psychoeducational Intervention Benefits the Quality of Life of Patients with Active Systemic Lupus Erythematosus

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**Objectives.** Systemic lupus erythematosus (SLE) is a complex and relapsing autoimmune disease and worsens the quality of life (QOL) of patients by affecting their physical and psychological status. The effectiveness of psychoeducational interventions on patients with active SLE was investigated. **Methods.** Eight-five patients with active SLE were randomly assigned to an observation group or a control group; patients in the observation group received psychoeducational interventions. The following variables were evaluated within a week after admission, 3 and 6 months after psychoeducational intervention: the World Health Organization Quality of Life Instrument- (WHOQOL-) BREF scores, the Medical Outcomes Study Short Form 36 (SF-36) scores, the Beck Depression Inventory, and Spielberger's State-Trait Anxiety Inventory (STAI). **Results.** We found that scores of all four domains of the WHOQOL-BREF scale were remarkably increased 3 months after psychoeducational intervention in the intervention group and significantly higher than the control group ( $P < 0.05$ ); 6 months after psychoeducational intervention, psychological and social domain scores of the WHOQOL-BREF scale were remarkably higher in the intervention group than those in the control group, while other scores of three domains were not. PF, RP, BP, GH, RE, and MH scores of the SF-36 scale were remarkably increased 3 months after psychoeducational intervention in the intervention group rather than VT and SF, while all scores of subscales were notably higher in the intervention group than those in the control group ( $P < 0.05$ ). Six months after psychoeducational intervention, PF, RP, BP, GH, and RE scores of the SF-36 scale were remarkably higher in the intervention group than those in the control group, while VT, SF, and MH scores were not. Three months after psychoeducational intervention, the levels of depression and anxiety of SLE patients were reduced and significantly lower than those in the control group ( $P < 0.05$ ). Six months after psychoeducational intervention, the level of depression was still reduced, while the level of anxiety was not. Compared with the control group, the levels of depression and anxiety of SLE patients were remarkably declined in the observation group 6 months after psychoeducational intervention ( $P < 0.05$ ). **Conclusion.** These data suggest psychoeducational interventions can significantly improve and maintain the QOL of patients with active SLE.

## 1. Background

Systemic lupus erythematosus (SLE) is a chronic, progressive, recurrent autoimmune disease involving multiple systems throughout the body, characterized by the loss of self-tolerance and formation of nuclear autoantigens and immune complexes [1]. SLE has heterogeneous presentation with a strong female predilection and is involved in more than one organ, including the skin, kidneys, joints, and nervous system [2]. Due to the multitude of presentations, manifestations, and serological abnormalities at onset for patients with SLE, the disease is a long-term fight and challenging. It

is challenging to reach a correct and prompt diagnosis, let alone initiation of the appropriate therapy [3]. Therapeutic approaches predominantly involve immunomodulation and immunosuppression and are targeted to the specific organ manifestation to achieve low disease activity [4]. Although many treatment advances and improved diagnostics, SLE leads to substantial morbidity and premature mortality, especially in pregnancy [5]. Current management strategies, although helpful, are limited by high failure rates and toxicity, mainly focusing on attenuation of the patients' symptoms and improvement of quality of life (QOL) [6]. Both the disease itself and the side effects caused by the long-term use

of hormones and immunosuppressive drugs have severely affected the QOL of patients [7]. At the same time, the repeated attacks of the disease and the long-term use of hormones and other drugs often cause great mental stress to patients, and most patients have different negative emotional reactions. Once the QOL significantly reduced and further affected the development and outcome of the disease [8]. Several randomized controlled trials have confirmed that stress-reduction program or psychoeducational intervention could improve the outcome and QOL of SLE patients [9, 10].

Recent evidence has shown that an interdisciplinary multidimensional approach encompassing psychological factors, emotion regulation strategies, and education on illness is more effective in improving quality of life, both in the short- and long-term, than usual treatments alone [11]. Psychoeducational interventions pay more attention to the influence of patients' psychological changes on the prognosis of the disease in addition to the conventional nursing care in the past [12]. Individualized psychological intervention programs are developed based on different psychological problems of patients. The specific measures are as follows: (1) negative psychological intervention measures: SLE patients usually have a lot of negative emotions after the diagnosis of the disease, which adversely affects the treatment process and recovery process of the patient, which we call negative psychological problems. The focus of our intervention for this kind of psychological problems is respect and encouragement, encourage the patients' relatives and friends to give patients full respect and love, and enhance the patient's sense of identity; (2) positive psychological intervention measures: some patients have good psychological quality, so they have a certain degree of confidence in overcoming the disease and hope that they will be respected and valued by others. We call this a positive psychological problem. For this kind of personalized psychological needs, we must fully understand the reasonable aspects and try our best to solve them; and for those that are difficult to satisfy, we must also do a good job of explaining and communicating, so as not to make patients feel frustrated, and do our best to create a comfortable and satisfying psychological environment for patients. The application of psychoeducational intervention in clinical nursing work is ultimately to improve the prognosis of patients and improve the QOL of patients. Therefore, a corresponding quantitative standard of QOL is needed to evaluate whether the intervention measures are reasonable. The present study is aimed at investigating effectiveness of psychoeducational interventions to improve the outcome and QOL of patients with active SLE by analyzing the following variables within a week after admission, 3 and 6 months after psychoeducational intervention: the World Health Organization Quality of Life Instrument- (WHOQOL-) BREF scores, the Medical Outcomes Study Short Form 36 (SF-36) scores, the Beck Depression Inventory, and Spielberger's State-Trait Anxiety Inventory (STAI).

## 2. Materials and Methods

*2.1. Subject Design and Entry Criteria.* Patients who met the diagnostic criteria issued by the American College of Rheu-

matology for SLE [13], had active disease (score  $\geq 6$  at screening on the Safety of Oestrogens in Lupus Erythematosus National Assessment SLE Disease Activity Index (SELENA-SLEDAI)) [14], and aged over 15 years were eligible for study subjects. The diagnostic criteria are detailed as follows: cheek erythema: fixed erythema, flat or elevated, erythema on the two zygomatic protrusions; discoid erythema: a flaky erythema that rises from the skin adheres to keratin desquamation and hair follicle plugs; atrophic scars can occur in old lesions; photosensitivity: it has a clear reaction to sunlight, causing a rash, which is known from the medical history or observed by the doctor; oral ulcers: oral or nasopharyngeal ulcers observed by a doctor are generally painless; arthritis: nonerosive arthritis, involving two or more peripheral joints, with tenderness, swelling, or fluid accumulation; serositis: pleurisy or pericarditis; kidney disease: urine protein  $> 0.59/24$  h or  $+++$ , or cast (red blood cell, hemoglobin, granular, or mixed cast); neuropathy: epileptic seizures or psychosis, except for drugs or known metabolic disorders; hematological diseases: hemolytic anemia or leukopenia, or lymphopenia, or thrombocytopenia; immunological abnormality: anti-dsDNA antibody is positive, or anti-Sm antibody is positive, or antiphospholipid antibody is positive (including anticardiolipin antibody, or lupus anticoagulant, or one of the three false positive syphilis serum tests lasting at least 6 months; antinuclear antibodies: antinuclear antibodies are abnormal at any time and when no drugs are used to induce "drug-induced lupus." Among these items, those who meet four or more items can diagnose SLE after excluding infections, tumors, and other connective tissue diseases. Exclusion criteria: illiteracy; severe active lupus nephritis or central nervous system (CNS) lupus; transferred to the intensive care unit (ICU) due to disease exacerbation; complicated with other autoimmune rheumatic disorders; primary diabetes, primary kidney disease, and malignant tumors; pregnant or lactating women; mental disorders; failing to complete the questionnaire due to various reasons. There were 89 hospitalized with SLE from January 2018 to January 2020 in our hospital. Considering that 2 cases were transferred to ICU due to worsening condition and 2 cases were withdrawn voluntarily, 85 patients who underwent all screening procedures and met the entry criteria were finally enrolled in the study. All patients were required to fill the WHOQOL-BREF questionnaire survey (Chinese version), the SF-36 questionnaire, the Beck Depression Inventory, and Spielberger's STAI, within a week after admission. Afterward, 85 SLE patients were randomly assigned to an intervention group with 42 cases and a control group with 43 cases. Both groups were given the same treatment protocols for SLE, health education, and nontargeted psychological comfort, while the patients in the intervention group received psychoeducational interventions according to questionnaire surveys they filled. Three and six months after psychoeducational interventions began, two groups of patients were required to fill these four questionnaires.

*2.2. The WHOQOL-BREF Scale.* The WHOQOL-BREF questionnaire survey (Chinese version) [15] is a cross-cultural instrument developed for use across patient groups in many

countries and contains 24 questions in 4 fields covering physical (7 items), psychological (6 items), social (3 items), and environment (8 items) domains. It uses a Likert-type five-point scale to grade the patient's response to the WHOQOL-BREF items. The scale gives continuous scores ranging from 4 to 20 for each domain. A higher score signifies better QOL. Keeping in view that the WHOQOL-BREF questionnaire survey is best measured by the patient himself/herself and not his or her physician or nurse. A higher score indicates a favorable condition. A higher domain score reflects a better QOL on the corresponding domain.

**2.3. The MOS SF-36 Scale.** The SF-36 scale is a self-administered instrument that has two major domains involving physical health and mental health [16]. It contains 36 questions that are divided over 8 subscales: physical function (PF, the ability to carry out physical activities); physical role (RP, measure of the interference of physical health in work or other daily activities); bodily pain (BP); general health (GH, a health assessment carried out by the subject); vitality (VT, the feeling of enthusiasm and energy the patient presents); social function (SF, the ability to carry out normal social activities without interference from physical or emotional problems); emotional role (RE, the interference of emotional problems at work and in other daily activities); and mental health (MH, the feeling of peace, happiness, and calm expressed by the patient). The SF-36 has been used extensively in health outcome studies in SLE patients and has excellent reliability (the subscales have internal reliability of 0.85 or better) and validity.

**2.4. Psychological Parameters.** We employed two instruments, the Beck Depression Inventory and Spielberger's State-Trait Anxiety Inventory (STAI), to measure psychological parameters of SLE. The Beck Depression Inventory [17] is a self-administered questionnaire consisting of 21 items that assess the cognitive components of depression rather than the behavioral and somatic ones. This is not a diagnostic instrument, but it does give an indication of the depth of depression in patients with any diagnosis. The scores on this instrument can be classified into the following categories: no depression, slight depression, moderate depression, and severe depression. Spielberger's State-Trait Anxiety Inventory (STAI) [18], created by Spielberger, Gorsuch, and Lushene, encompasses two separate self-evaluation scales that measure 2 independent concepts of anxiety, i.e., state and trait.

**2.5. Psychoeducational Interventions.** Intervention content: (a) disease knowledge: basic understanding of the clinical manifestations, outcome and treatment protocols of the disease, and the importance of self-care; confidence reconstruction about marriage and childbirth for unmarried patients by delivering scientific explanations; (b) emotion and feeling: being encouraged in depressed mood after the disease was attenuated or cured by exemplifying some cases with good treatment effect and stable disease; receiving easy and pleasant communication from peers about their feelings and

thoughts; for those being concerned about treatment costs and family burden caused by SLE since there has a long-term psychological process of fighting, nurses should patiently tell them that as long as they received systemic treatment to maintain the stability of the disease, the occurrence of complications can be reduced, and the reduction of medication and treatment will relatively means lower treatment costs. Once the disease is stable, they can make money to reduce the economy burden. At the same time, it is necessary to tell the family members about the patient's concerns, to ensure family member support in all aspects; (c) behavioral intervention: frequent examination of the patient's compliance to treatment and clear notification about the importance of accurate dosage and timing of medication; some patients, in order to reduce the side effects of hormones, often secretly reduce the dosage of medication by themselves, which is very unfavorable to the control of the active period of the disease; nurses must ensure that the patient takes the medication in time every day; patients should tell the medical staff about their discomfort at any time without any hesitation, and the medical staff will deal with the symptoms and signs immediately to avoid the aggravation of the disease and reduce the occurrence of complications; foster good habits to establish health life style; strike a proper balance between work and rest; do everything in one's power; positive about life and grateful for family and friend help; (d) discharge instructions: accurate medication, regulator return visit, self-protection, caution for having a cold; fertility guidance for women with childbearing age; comfortable communication with patients about their mental state, recognition of the disease, approval of treatment, adaptation to the environment, influence on interpersonal communication, attitude towards family members and friends, future plans, etc. For those who had poor acceptance and showed no evident effect, the intervention will be repeated many times. After the patients were discharged from hospital, the nurse should keep in touch with them, make regular telephone follow-up visits, understand the psychological status of the patients, carry out timely psychological intervention, and obtain regular feedback. For special cases such as severe depression and suicidal tendency, professional psychotherapists should be invited to give special help.

**2.6. Statistical Processing.** The data was processed by SPSS 21.0 statistical software. The measurement data is expressed by mean  $\pm$  standard deviation, and the *t* test is performed. The count data is expressed by cases (percentage), and the chi-square test is performed.  $P < 0.05$ , the difference was statistically significant.

### 3. Results

**3.1. Description of Participant Demographics.** A total of 85 hospitalized with SLE from January 2018 to January 2020 were eligible for study enrollment and randomly assigned to a study group with 42 cases and a control group with 43 cases. Participant demographics are listed in Table 1. There were no significant differences with regard to age, sex, SLE-DAI scores, level of education, manual or nonmanual

TABLE 1: Participant demographics, by group.

Demographics	Intervention group ( $n = 42$ )	Control group ( $n = 43$ )	$P$
Age (years)	37.58 $\pm$ 5.28	35.76 $\pm$ 4.87	0.10
Female (%)	100	95.35	0.16
SLEDAI score	9.62 $\pm$ 3.75	10.14 $\pm$ 3.81	0.53
Level of education (years)	9.59 $\pm$ 2.64	9.88 $\pm$ 2.71	0.62
Occupation			0.64
Nonmanual worker	28	30	
Manual workers	14	13	
Married (%)	73.81	76.74	0.75
Disease duration (years)	6.09 $\pm$ 1.52	5.76 $\pm$ 1.14	0.26
Treatment with corticosteroids (%)	45	47	0.91
Treatment with immunosuppressants (%)	34	30	0.76
Hospital stay (days)	18.47 $\pm$ 6.11	16.59 $\pm$ 4.63	0.11

NS: not significant.

workers, marriage, disease duration, treatment with corticosteroids and immunosuppressants, and hospital stay between the intervention group and the control group ( $P > 0.05$ ), and the two groups were comparable.

**3.2. Psychoeducational Interventions Increased the WHOQOL-BREF Scores of Patients with Active SLE.** In order to demonstrate whether psychoeducational interventions improve the QOL of patients with active SLE, each patient was required to fill the WHOQOL-BREF questionnaire survey within a week after admission, 3 and 6 months after psychoeducational intervention. The WHOQOL-BREF scale contains 4 fields covering physical, psychological, social, and environment domains and gives continuous scores ranging from 4 to 20 for each domain. A higher score signifies better QOL. As shown in Table 2(a), no significant difference was detected in physical, psychological, social, and environment domain scores of the WHOQOL-BREF scale between the intervention group and the control group within a week after admission ( $P > 0.05$ ); it was found that scores of all four domains of the WHOQOL-BREF scale were remarkably increased 3 months after psychoeducational intervention in the intervention group (physical domain: 13.13  $\pm$  2.79 vs. 16.34  $\pm$  3.87,  $P < 0.001$ ; psychological domain: 12.95  $\pm$  3.04 vs. 16.12  $\pm$  4.03,  $P < 0.001$ ; social domain: 15.08  $\pm$  3.53 vs. 18.02  $\pm$  4.79,  $P = 0.002$ ; environment domain: 13.82  $\pm$  1.94 vs. 17.86  $\pm$  4.12,  $P < 0.001$ ) and significantly higher than the control group (Table 2(b),  $P < 0.05$ ); 6 months after psychoeducational intervention, psychological and social domain scores of the WHOQOL-BREF scale were remarkably higher in the intervention group than those in the control group, while other scores of three domains were not (Table 2(b),  $P < 0.05$ ). Results revealed that psychoeducational interventions improved the QOL of patients with active SLE.

**3.3. Psychoeducational Interventions Increased the SF-36 Scores of Patients with Active SLE.** The SF-36 scale was also used to reflect the QOL of patients with active SLE. Each patient was required to fill the SF-36 questionnaire survey within a week after admission, 3 and 6 months after psycho-

educational intervention. There was no evident difference in terms of PF, RP, BP, GH, VT, SF, RE, and MH scores of the SF-36 scale between the intervention group and the control group within a week after admission (Table 3(a),  $P > 0.05$ ). PF, RP, BP, GH, RE, and MH scores of the SF-36 scale were remarkably increased 3 months after psychoeducational intervention in the intervention group (PF: 76.34  $\pm$  20.12 vs. 87.46  $\pm$  14.87,  $P = 0.005$ ; RP: 32.53  $\pm$  28.29 vs. 56.46  $\pm$  35.48,  $P = 0.001$ ; BP: 55.75  $\pm$  17.63 vs. 69.14  $\pm$  16.96,  $P < 0.001$ ; GH: 40.59  $\pm$  15.63 vs. 48.92  $\pm$  14.57,  $P = 0.013$ ; RE: 46.27  $\pm$  37.40 vs. 67.73  $\pm$  35.34,  $P = 0.008$ ; MH: 55.42  $\pm$  12.58 vs. 70.68  $\pm$  21.75,  $P < 0.001$ ) rather than VT (46.84  $\pm$  9.76 vs. 53.48  $\pm$  20.43,  $P = 0.061$ ) and SF (53.76  $\pm$  22.01 vs. 62.91  $\pm$  29.13,  $P = 0.108$ ), while all scores of subscales were notably higher in the intervention group than those in the control group (Table 3(b),  $P < 0.05$ ). Six months after psychoeducational intervention, PF, RP, BP, GH, and RE scores of the SF-36 scale were remarkably higher in the intervention group than those in the control group, while VT, SF, and MH scores were not (Table 3(b),  $P < 0.05$ ). These data suggested that psychoeducational interventions improved the QOL of patients with active SLE.

**3.4. Psychoeducational Interventions Attenuated the Depression and Anxiety of Patients with Active SLE.** SLE is a relapsing autoimmune disease, and SLE patients are required to fight this disease for a long time. SLE patients must keep themselves from depression and anxiety. To study the effects of psychoeducational interventions on the depression and anxiety of patients with active SLE, we employed two instruments, the Beck Depression Inventory and the STAI, to measure psychological parameters of SLE patients. The observation and control groups exhibited no significant difference in the levels of depression and anxiety before psychoeducational intervention ( $P > 0.05$ ). Three months after psychoeducational intervention, the levels of depression and anxiety of SLE patients were reduced (15.2  $\pm$  10.37 vs. 7.56  $\pm$  5.11,  $P < 0.001$ ; 65.68  $\pm$  28.36 vs. 45.00  $\pm$  28.75,  $P = 0.001$ ) and significantly lower than those in the control group (Table 4,  $P < 0.05$ ). Six months after psychoeducational

TABLE 2

(a) The WHOQOL-BREF scores of patients with active SLE between the intervention group and the control group within a week after admission

WHOQOL scale	Within a week at admission		<i>P</i>
	Intervention group ( <i>n</i> = 42)	Control group ( <i>n</i> = 43)	
Physical	13.13 ± 2.79	13.55 ± 3.36	0.53
Psychological	12.95 ± 3.04	13.17 ± 3.44	0.76
Social	15.08 ± 3.53	14.69 ± 3.78	0.62
Environmental	13.82 ± 1.94	14.25 ± 2.31	0.36

(b) The WHOQOL-BREF scores of patients with active SLE between the intervention group and the control group, 3 and 6 months after psychoeducational intervention

WHOQOL scale	Three months after intervention			Six months after intervention		
	Intervention group ( <i>n</i> = 42)	Control group ( <i>n</i> = 43)	<i>P</i>	Intervention group ( <i>n</i> = 42)	Control group ( <i>n</i> = 43)	<i>P</i>
Physical	16.34 ± 3.87	13.45 ± 2.73	<0.001	14.88 ± 3.24	14.12 ± 3.65	0.31
Psychological	16.12 ± 4.03	12.89 ± 2.69	<0.001	15.25 ± 3.98	12.56 ± 3.33	0.001
Social	18.02 ± 4.79	13.94 ± 3.61	<0.001	16.87 ± 4.57	15.03 ± 3.48	0.04
Environmental	17.86 ± 4.12	15.01 ± 3.52	<0.001	15.69 ± 4.07	14.66 ± 2.85	0.18

TABLE 3

(a) The SF-36 scores of patients with active SLE between the intervention group and the control group within a week after admission

SF-36 scale	Within a week at admission		<i>P</i>
	Intervention group ( <i>n</i> = 42)	Control group ( <i>n</i> = 43)	
PF	76.34 ± 20.12	77.43 ± 19.13	0.80
RP	32.53 ± 28.29	33.45 ± 26.78	0.88
BP	55.75 ± 17.63	53.69 ± 21.57	0.63
GH	40.59 ± 15.63	39.63 ± 15.36	0.78
VT	46.84 ± 9.76	47.49 ± 15.14	0.82
SF	53.76 ± 22.01	52.85 ± 18.73	0.84
RE	46.27 ± 37.40	45.27 ± 41.15	0.91
MH	55.42 ± 12.58	57.94 ± 16.32	0.43

(b) The WHOQOL-BREF scores of patients with active SLE between the intervention group and the control group, 3 and 6 months after psychoeducational intervention

SF-36 scale	Three months after intervention			Six months after intervention		
	Intervention group ( <i>n</i> = 42)	Control group ( <i>n</i> = 43)	<i>P</i>	Intervention group ( <i>n</i> = 42)	Control group ( <i>n</i> = 43)	<i>P</i>
PF	87.46 ± 14.87	78.21 ± 17.53	0.01	84.95 ± 15.23	76.04 ± 16.37	0.01
RP	56.46 ± 35.48	38.89 ± 27.13	0.01	52.55 ± 29.09	35.54 ± 23.17	0.004
BP	69.14 ± 16.96	51.99 ± 18.16	<0.001	65.25 ± 20.72	54.11 ± 27.15	0.04
GH	48.92 ± 14.57	38.42 ± 16.09	0.002	50.32 ± 15.15	37.77 ± 17.54	<0.001
VT	53.48 ± 20.43	45.72 ± 14.15	0.04	49.58 ± 20.18	46.66 ± 17.39	0.48
SF	62.91 ± 29.13	50.74 ± 20.20	0.03	55.38 ± 24.04	53.59 ± 25.16	0.74
RE	67.73 ± 35.34	52.02 ± 33.95	0.04	65.91 ± 32.39	51.55 ± 29.53	0.04
MH	70.68 ± 21.75	60.44 ± 20.26	0.03	58.73 ± 19.03	61.24 ± 25.80	0.80

TABLE 4: The depression (Beck Depression Inventory) and anxiety (STAI) of patients with active SLE between the intervention group and the control group within a week after admission, 3 and 6 months after psychoeducational intervention.

	Within a week at admission			Three months after intervention			Six months after intervention		
	Intervention group ( $n = 42$ )	Control group ( $n = 43$ )	$P$	Intervention group ( $n = 42$ )	Control group ( $n = 43$ )	$P$	Intervention group ( $n = 42$ )	Control group ( $n = 43$ )	$P$
Depression (Beck Depression Inventory)	15.20 ± 10.37	16.53 ± 11.19	0.57	7.56 ± 5.11	17.23 ± 13.21	<0.001	10.12 ± 8.42	17.55 ± 13.78	0.004
Anxiety (Spielberger's STAI)	65.68 ± 28.36	68.81 ± 25.36	0.59	45.00 ± 28.75	69.46 ± 26.38	<0.001	54.99 ± 27.41	68.31 ± 30.94	0.04

TABLE 5: Comparison of the incidence of clinical complications between the intervention group and the control group, 3 and 6 months after psychoeducational intervention.

Complications	Three months after intervention			Six months after intervention		
	Intervention group ( $n = 42$ )	Control group ( $n = 43$ )	$P$	Intervention group ( $n = 42$ )	Control group ( $n = 43$ )	$P$
Allergy	1	2	0.57	4	7	0.38
Infection	0	1	0.32	1	2	0.57
Kidney injury	0	0	0	1	3	0.32
Total complications	1	3	0.32	5	12	0.07

intervention, the level of depression was still reduced ( $15.2 \pm 10.37$  vs.  $10.12 \pm 8.42$ ,  $P = 0.016$ ), while the level of anxiety was not ( $65.68 \pm 28.36$  vs.  $54.99 \pm 27.41$ ,  $P = 0.083$ ). Compared with the control group, the levels of depression and anxiety of SLE patients were remarkably declined in the observation group, 6 months after psychoeducational intervention (Table 4,  $P < 0.05$ ). These data suggested that psychoeducational interventions were beneficial for the mental health of patients with active SLE.

**3.5. Clinical Complications.** We performed statistics on the number of SLE patients with clinical complications such as allergies, infections, and kidney injury between the intervention group and the control group, 3 and 6 months after psychoeducational intervention. It was revealed that there was no significant difference with regard to the incidence of allergies, infections, and kidney injury and the incidence of total complications between the intervention group and the control group, 3 and 6 months after psychoeducational intervention (Table 5,  $P > 0.05$ ).

#### 4. Discussion

SLE is an autoimmune disease, which can affect multiple systems and multiple organs of the body, undergoes repeated changes, and has unusually complex clinical manifestations. The effectiveness of psychoeducational interventions on the QOL of patients with active SLE was explored. A total of 85 patients with active SLE were included in this study and grouped into the observation group and the control group. Four scales were used to reflect the QOL and mental status of patients after psychoeducational interventions. The nursing measures are as follows: (1) skin care: instruct patients

to keep their skin clean and dry, add moisture and nutrients in time, reduce skin pressure, and avoid chemical irritation; (2) care for edema: if patients develop edema of the lower extremities, they should control their intake into the water and sodium content, keep the lower limbs elevated, and avoid electrolyte disturbance and dehydration; (3) recurrence prevention measures: patients with SLE may have fever, hair loss, and joint pain in the early stages of recurrence. Patients should avoid influenza during treatment, and female patients should avoid unplanned births. In addition, nurses create a good treatment environment, protect patients from external interference, and reduce disease recurrence. (4) Psychoeducational intervention: after the onset of the patient's illness, his social role changes, and he cannot adapt to it for a while. There will be tension, anxiety, pessimism, and other negative psychology. At this time, the nursing staff should comfort, encourage the patient, and guide the patient's family to care for and enlighten the patient. Let patients regain their confidence and adapt to the new environment.

We found that scores of all four domains of the WHOQOL-BREF scale were remarkably increased 3 months after psychoeducational intervention in the intervention group and significantly higher than the control group; 6 months after psychoeducational intervention, psychological and social domain scores of the WHOQOL-BREF scale were remarkably higher in the intervention group than those in the control group, while other scores of three domains were not. PF, RP, BP, GH, RE, and MH scores of the SF-36 scale were remarkably increased 3 months after psychoeducational intervention in the intervention group rather than VT and SF, while all scores of subscales were notably higher in the intervention group than those in the control group. Six months after psychoeducational intervention, PF, RP, BP,

GH, and RE scores of the SF-36 scale were remarkably higher in the intervention group than those in the control group, while VT, SF, and MH scores were not. Three months after psychoeducational intervention, the levels of depression and anxiety of SLE patients were reduced and significantly lower than those in the control group. Six months after psychoeducational intervention, the level of depression was still reduced, while the level of anxiety was not. Compared with the control group, the levels of depression and anxiety of SLE patients were remarkably declined in the observation group, 6 months after psychoeducational intervention. All these findings revealed that psychoeducational intervention could effectively improve the QOL of patients with active SLE.

Nursing staff should pay attention to the changes in the patient's mood, thinking, speech, and behavior, understand the impact of various factors on the patient's psychological activities, pay attention to understanding the patient's physical, psychological, and social information through communication, and find out the patient's psychological health problems, so as to formulate corresponding psychological support and treatment measures, such as use of listening assurance techniques, comfort and enlightenment, care and sympathy, explanation, advice and guidance, encouragement, and extreme language applications [19]. Nurses must patiently explain to patients the occurrence and development process of the disease, the purpose and significance of various examinations and treatments, as well as the rapid development of medicine, immunology, pharmacy, and molecular biology, and the improvement of diagnosis and treatment technology, and the prognosis has been greatly improved. A happy mood plays a positive role in promoting the improvement of the disease, which is very important for stable treatment. It has been reported that mental stress or stress can cause immune system disorders through the neuroendocrine system and promote or aggravate SLE. Psychological supports and programs are effective in dealing with patients suffering from SLE and high levels of daily stress as it significantly reduces the incidence of psychological disorders associated with SLE and improves and maintains the QOL of patient, despite there being no significant reduction in the disease activity index [20].

The improvements found in the QOL of SLE patient and reduced levels of depression and anxiety suggest that psychoeducational interventions could cope with the disease easier and change patients' mental health. Furthermore, the impact of therapy on QOL and psychosocial aspects may have implications for longer-term health behaviors and health outcomes. These preliminary results should be verified in further studies. If the findings are confirmed, then this could signal a new, more effective approach to dealing with SLE, given that a comprehensive, overall view of these patients is necessary when treating the clinical and psychological aspects of the disease.

## Data Availability

The data used to support the findings of this study are included within the article.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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