
Application of Individualized Nursing Intervention in the Nursing of Patients Who Were Treated in Department of Rheumatism and Immunology

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Abstract: Objective: To assess application of individualized nursing intervention in the nursing of patients who were treated in department of rheumatism and immunology. Method: From May 2018 to December 2020, we collected valid data from 78 patients with rheumatic immune disease. According to nursing intervention type, we assigned participants to intervention groups and control group, that control group participants received common nursing intervention, and intervention group participants received individualized nursing intervention. In this study, we collect the data from patients' medical records and questionnaires, the questionnaires include medical treatment compliance research and satisfaction research. Result: In patient characteristics research, gender factors were significant different among control group and intervention group, but other factors are similar as their results were not statistically significant. As for medical treatment compliance assessment, intervention group had better assessment compare with control group in the treatment. Although most assessments of two group participants were great satisfaction, participants in the intervention group were more satisfied with the individualized nursing intervention. Conclusion: individualized nursing intervention had better effect that was significantly higher than common nursing intervention. Base on the result of this study, individualized nursing intervention not only improve medical treatment compliance of patients with rheumatic immune disease but also increase satisfaction rate in treatment.

Keywords: Nursing, Rheumatic Immune Disease, Medical Treatment Compliance, Satisfaction

1. Introduction

The principle of rheumatic immune disease is induced from the dysregulation of the autoimmune system or the use of certain drugs lead to suppression of the immune system or immune deficiency [1]. Therefore, as their own immune diseases, patients with rheumatic immune diseases are more likely to suffer from other infectious diseases than normal people [2, 3]. In recent years, some reports show the patients with rheumatic diseases have constituted a large proportion of immunocompromised person as the underlying conditions perse and taken immunosuppressive medications [4-6]. They are at higher risk for diseases such as rheumatic influenza infection, pneumococcal pneumonia, primary chicken pox infection and herpes zoster [7, 8]. As most of the patients with rheumatic immune diseases are chronic diseases, patients with

rheumatic immune diseases will need related nursing interventions for a long time.

According to some research reports, different nursing intervention can improve treatment effect on patient with rheumatic immune disease in different aspects. However, their research results were different, and their survey data differ greatly [9-11]. In treatment process of rheumatic immune disease, nursing intervention has been shown to be a key factor as it can improve patients' medical treatment compliance and their mental health. For example, Song thinks that sleep-aid nursing interventions can improve the mental health of patients to the extent that they can enhance the therapeutic effect [12]. Therefore, the study of different nursing intervention is worthy in the patient with rheumatic immune disease.

Individualized nursing intervention is a customized nursing

intervention base on needs of patients, the condition of patients, the equipment of hospitals and the skills of medical staff [16]. In China, many hospitals will recommend individualized nursing interventions to patients themselves in treatment. For example, He's report present that they use individualized nursing intervention to improve treatment effect and health of patient [17]. The aim of this study was to evaluate application of individualized nursing intervention in the nursing of patients who were treated in department of rheumatism and immunology.

2. Methods

2.1. Participants Enrollment and Survey Methods

During May 2018 to December 2020, we invited 89 patients to join this study who received treatment in department of rheumatism and immunology. However, 11 patients had not complete valid data from their medical records, so we only collected valid data from 78 patients with rheumatic immune disease. We randomly assigned participants to two groups, and two groups participants received different nursing intervention. Control group participants received common nursing intervention, and intervention group participants received individualized nursing intervention during treatment. As for data research, the patients' basic information was collected from their medical records, that include age, gender, course of the disease, diagnosis and treatment outcome. In addition, the researchers use questionnaires to collected satisfaction assessment and medical treatment compliance assessment from participants of two groups.

For the individualized nursing intervention, we provide additional nursing interventions base on common nursing intervention, that additional nursing interventions contrast mental intervention, medical knowledge education and pain nursing intervention. Before receiving treatment, we provided

related medical knowledge to patients by holding small course, and according to the patient's situation, we help the patient to analyze their condition and look for their bad habits. On the other hand, we communicate with patients periodically, it is good for monitoring and improving patients' mental health. We also provide individualized measures to patients who feel excruciating pain, it improves comfort and sleep quality of patient.

inclusion criteria include: (1) patient receive treatment in department of rheumatism and immunology; (2) patients volunteered to join this study; (3) patients have complete medical record. withdraw criteria include: (1) patients changed hospitals or medical department during the treatment; (2) they have serious complications.

2.2. Statistical Analysis

The testes were associated with collection result were analyzed by SPSS 22.0, such as -test and chi-square test. In this study, $P < 0.05$ was considered a statistically significant, and statistical description include mean and standard deviation.

3. Result

According to characteristics research result of participants, gander factors were significant different among control group and intervention group, but other factors are similar as their results were not statistically significant (Table 1). Intervention group had 37 (94.9%) female patients, that it was much more than the number of women in the control group. Besides, Table 1 indicates that the several factors were no associated with improving of individualized nursing intervention, such as age factor, course of the disease factor and treatment outcome factor (38.69 ± 15.21 vs 40.90 ± 11.87 & 5.25 ± 5.01 vs 6.05 ± 5.26 & 33 vs 39).

Table 1. Patient characteristics (Mean \pm SD).

	Age (year)	Gender (female)	Course of the disease (year)	Treatment Outcome (Discharge after treatment)
Control group (n = 39)	38.69 \pm 15.21	26 (66.7%)	5.25 \pm 5.01	33 (84.6%)
Intervention group (n = 39)	40.90 \pm 11.87	37 (94.9%)	6.05 \pm 5.26	39 (100%)
P value	> 0.05	< 0.05	> 0.05	> 0.05

Table 2 below shows comparison of medical treatment compliance assessment among control group and intervention group. During the study period, intervention group participants had better performance in following medical staff's instructions aspect. Most of intervention group participants obtain higher medical treatment compliance level

assessment from the researchers (n = 33 vs n = 27). In addition, the researchers think most control group participants only had middle level of medical treatment compliance (n = 10 vs n = 4), and the cases of low medical treatment compliance assessment were same among two groups (n = 2).

Table 2. Comparison of medical treatment compliance assessment.

	Medical treatment compliance score (Mean \pm SD) (Total Score: 8)	High medical treatment compliance level (case,%)	Middle medical treatment compliance level (case,%)	Low medical treatment compliance level (case,%)
Control group (n = 39)	5.15 \pm 2.19	27 (69.2%)	10 (25.6%)	2 (5.1%)
Intervention group (n = 39)	7.08 \pm 1.87	33 (84.6%)	4 (10.3%)	2 (5.1%)
t	14.70	7.12	17.65	0.26
P value	< 0.005	< 0.05	< 0.005	> 0.05

Table 3 and Figure 1 display satisfaction assessment of participants during treatment period. Overall, most

participants provided satisfaction assessment of great level, and only few participants were dissatisfied with the hospital's services. Among control group and intervention group, the nursing intervention of intervention group obtained better assessment than that of control group (97.4% vs 84.6%).

Intervention group had 31 cases of great satisfaction assessment, but control group only had 20 cases in great satisfaction assessment. Besides, control group participants provide more general satisfaction assessment and dissatisfaction assessment in this study.

Table 3. Comparison of satisfaction assessment.

	great satisfaction (case,%)	general satisfaction (case,%)	Dissatisfaction (case,%)	Satisfaction rate (%)
Control group (n = 39)	20	13	6	84.6%
Intervention group (n = 39)	31	7	1	97.4%
t	21.55	15.68	34.90	8.95
P value	< 0.005	< 0.005	< 0.005	< 0.05

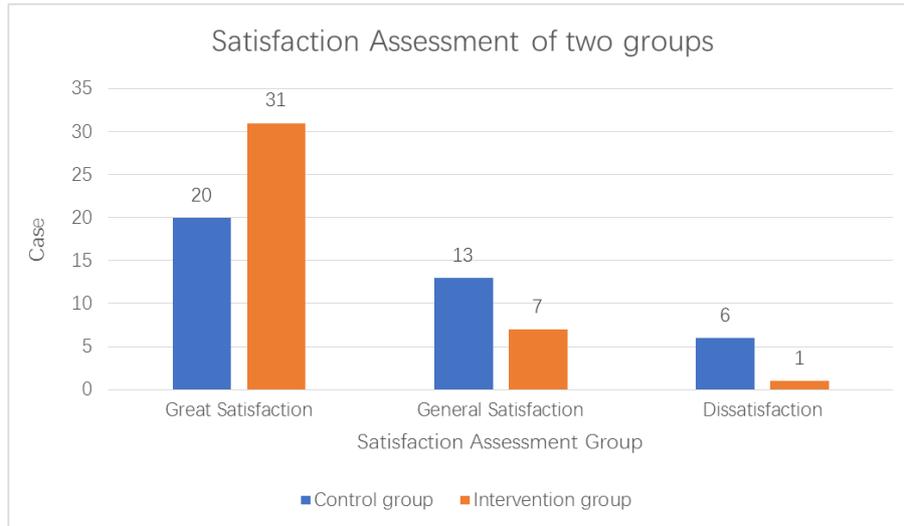


Figure 1. Satisfaction assessment of two groups.

4. Discussion

In dataset of participant, we observed 84.6% of assessment of high medical treatment compliance level, and 97.4% of satisfaction rate for their treatment, which we provide individualized nursing intervention. Regardless of nursing intervention type, the nursing intervention improve treatment for patients with rheumatic immune disease. Of those, intervention group had better medical treatment compliance compare with control group, and satisfaction rate was higher among intervention group compare to control group. Those medical treatment compliance assessment and satisfaction assessment are similar to those observed in different hospital, and some studies have reported that individualized nursing intervention can improve recovery and treatment effect for patients with rheumatic immune disease [13-15]. Different in gender factor and location of the patient likely contributed to our observed lower estimate. Increasing attention has been paid to the feelings of patients due to changes of patient require and trends in lifestyle risk factors. Those risk factors also contribute to treatment outcome of patients with rheumatic immune disease and risk of complications. The result was similar to the result of Zhang's report, that individualized nursing intervention provide more effective treatment effect to the patients [16].

Several strengths and limitations are relevant to this study.

First, there is very low cost for changing to individualized nursing intervention and keeping individualized nursing intervention, that hospital only need to establishes relevant work in the medical staff and periodically trains nurses. Second, high satisfaction rate is good for improving hospital image, and high medical treatment compliance level can reduce the workload and difficulty of medical staff. In several limitations, small sample size may lead to bias in the results.

5. Conclusion

Overall, individualized nursing intervention had better effect that was significantly higher than common nursing intervention. individualized nursing intervention not only improve medical treatment compliance of patients with rheumatic immune disease but also increase satisfaction rate in treatment. Although most assessments of two group participants were great satisfaction, participants in the intervention group were more satisfied with the individualized nursing intervention.

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