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Effect of TCM Nursing Combined with Relaxation Training and Postpartum Recovery Training on Postpartum Depression of Primiparas

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Abstract

Objective: The purpose was to analyze the effect of traditional Chinese medicine (TCM) nursing combined with relaxation training and postpartum recovery training on postpartum depression of primiparas.

Methods: 100 primiparas with postpartum depression in our hospital from July 2018 to May 2019 were selected as the study subjects, and divided into control group and test group according to their admission order. The control group of primiparas received conventional nursing intervention while the test group of primiparas received TCM intervention combined with relaxation training and postpartum recovery training to analyze the HAMD-17 scores (Hamilton rating scale for depression), EPDS scores (Edinburgh postnatal depression scale), PSQI scores (Pittsburgh sleep quality index) and SDS scores (self-rating depression scale) before and after intervention.

Results: After intervention, the HAMD-17 scores of primiparas in both groups significantly decreased, and the HAMD-17 scores of primiparas in the test group were significantly lower than those of the control group, with statistical significance (P<0.01). There were no significant differences in EPDS, PSQI and SDS scores between the two groups of primiparas before intervention. After 30 and 60 days of intervention, the EPDS scores (13.33±1.65, 11.75±1.32), PSQI scores (7.51±0.08, 5.98±0.06) and SDS scores (54.85±6.25, 43.32±4.85) of the test group were significantly lower than (14.58±1.79, 12.81±1.39), (8.74±1.04, 6.88±0.09) and (63.02±7.61, 50.42±5.54) of the control group, with statistical significance (t=3.63, 3.91, 8.34, 58.83, 5.86, 6.82; p=0.00, 0.00, 0.00, 0.00, 0.00, 0.00).

Conclusion: TCM combined with relaxation training and postpartum recovery training not only improves the postpartum depression of primiparas, but also has a positive effect on alleviating their bad psychology and improving their sleep quality.

Keywords: traditional Chinese medicine (TCM) nursing; relaxation training; postpartum recovery training; primipara; postpartum depression; impact; effect

Introduction

Pregnancy and childbirth are stress events. Most pregnant women will undergo great changes both in their physiology and psychology, especially primiparas, who are very prone to adverse psychological conditions such as depression in unfamiliar environments(Viren et al., 2020; Hsiao-Chen et al., 2020; Ida et al., 2019). In addition, primiparas will face the changes in social and family roles during pregnancy and childbirth, and their psychological burden will increase. If not solved in time, it is very likely to cause adverse psychology such as depression (IerardiJanet et al., 2019; Sona-Sanae et al., 2019; Eddy et al., 2019). The adverse psychology of primiparas will affect the the delivery time by causing the disorders of endocrine function and central nervous function. Once the maternal delivery time is too long, it is very easy to cause adverse pregnancy outcomes,

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which seriously threatens the safety of mothers and infants (Băcilă et al., 2019; Marti et al., 2019). Although western antidepressants are effective in treatment, they have major side effects, and long-term use will cause adverse effects on mothers and infants. In this study, in order to analyze the effect of TCM nursing combined with relaxation training and postpartum recovery training on postpartum depression of primiparas, 100 primiparas with postpartum depression in our hospital from July 2018 to May 2019 were selected as the study subjects, aiming to provide an important theoretical basis for the prevention and nursing of postpartum depression, specifically reported as follows.

1. Materials and Methods

1.1 General Information

100 primiparas with postpartum depression in our hospital from July 2018 to May 2019 were selected as the study subjects, and divided into control group and test group according to their admission order. There was no significant difference in general clinical data such as age and course of disease between the two groups (P>0.05), which was comparable, as shown in Table 1.

Table 1. **General Clinical Data of Two Groups of Primiparas**

Factors		Control group (n=50)	Test group （n=50）
Average age (years old)		30.42±8.04	30.44±8.05
Average delivery time (h)		12.51±1.78	12.54±1.75
Average disease duration (d)		30.08±5.55	30.05±5.48
Depression levels	**Mild**	22	20
	Moderate	28	30
Types of delivery	**Cesarean section**	8	9
	Natural delivery	42	41
Educational levels	**Primary school**	3	2
	Junior middle school	20	21
	High school	17	16
	University	10	11
EPDS scores		16.63±2.25	16.65±2.27

1.2 Criteria for Diagnosis, Inclusion and Exclusion of Postpartum Depression

1.2.1 Diagnostic Criteria for Postpartum Depression

The clinical diagnosis was made according to EPDS and the Chinese Classification and Diagnostic Criteria of Mental Disorder, Version 3 (CCMD-3). The degree of maternal depression was clinically diagnosed according to the HAMD-17 scores, as shown in Table 2.

Table 2. **HAMD-17 Depression Scale**

Scores (points)	Depression
8≤HAMD-17 scores<16	**Mild depression**
17≤HAMD-17 scores<23	**Moderate depression**
24≤HAMD-17 scores	**Severe depression**

1.2.2 Inclusion Criteria

(1) All subjects were primiparas.
(2) All patients were clinically diagnosed as mild or moderate postpartum depression.
(3) The age of the primiparas was 23-40 years old, with the course of disease more than or equal to 28 days.
(4) All parturients had no history of depression.
(5) This study was approved by the hospital ethics committee, and the primiparas and their family members knew the treatment, and signed a consent form.

1.2.3 Exclusion Criteria

(1) The primiparas had a history of mental illness.
(2) The primiparas had poor treatment compliance.
(3) The primiparas had intrapartum or prenatal complications.
(4) The primiparas had neonatal malformation or other inflammation.

1.3 Methods

The control group received conventional nursing intervention, such as routine drugs, psychological

and postpartum mother-child nursing intervention, etc. The test group received TCM intervention combined relaxation training and postpartum recovery training, as follows.

TCM nursing. After no bleeding occurs within 2 hours after delivery, acupuncture, massage or patches, etc. were used to stimulate corresponding acupoints of the gallbladder, liver, stomach and spleen on the the auricular points of the primiparas, so as to promote normal function of viscera and remove blood stasis. The primiparas with different physiques were divided into Qi and blood deficient type and stagnation of liver Qi type, which were treated with different acupoints, once a day for 14 days, with a total of 2 courses. During the treatment period, the nursing staff should instruct the primiparas to perform self-massage for 15 minutes.

Relaxation training. The primiparas should perform relaxation training 3 hours after meals, and choose airflow and quiet indoor training. Before the training, the primiparas should empty the urine and defecate, wear loose clothes, go barefoot and prepare a cushion. During the training, 2 nursing staff served as coaches, in which 1 was responsible for action demonstration and 1 was in charge of action guidance. Easy and soothing music was played during the training. Firstly, the primiparas performed breathing training for 10 minutes and carried out relaxation training from simple to complex in a cross-legged posture under the demonstration of the nursing staff, mainly with comfort. During the training, the actions should be combined with breath, and each movement should be finished with a deep breath. After the training, the primiparas communicated with each other, 1 time/h, 4 times/w, and 8 times of continuous treatment in total.

Postpartum recovery training. (1) Postoperative activity intervention. After 6h postpartum, the primiparas took a semi-recumbent position. They were informed of importance of early activities and main methods of activities to perform abdominal massage every 6 hours for 5 minutes each time. The nursing staff instructed the primiparas to bend knees, sit up and turn over in bed. After extubation, the nursing staff should encourage the primiparas to get out of bed and urinate by themselves. Two days after surgery, outdoor activities were performed with the assistance of nursing staff. Three days after surgery, the primiparas should move independently, and take care of the infant and postpartum self-care under the guidance of the nursing staff. (2) Postoperative dietary intervention. Six hours after the operation, primiparas should eat liquid food with high vitamins without sugar and milk food. A reasonable diet was conducive to postpartum lactation and recovery. Nursing staff actively communicated with mothers and the family members to promote their treatment compliance. (3) Postoperative pain intervention. Primiparas often had adverse psychology due to the lack of knowledge about knife-edge pain after surgery. Nursing staff should carry out active psychological intervention after surgery to promote the recovery of maternal psychological and physical health. (4) Maternal breastfeeding was recommended, which was conducive the recovery of maternal psychological, endocrine and physiological functions so that the primiparas could timely change the role.

1.4 Evaluation indexes

(1) HAMD-17 was used to evaluate the severity of maternal depression, which was divided into seven factors including anxiety, sleep disorder, despair, block, day and night, body mass and cognitive impairment. The higher the HAMD-17 score was, the more serious the maternal depression was.

(2) The PSQI was used to evaluate the sleep quality of primiparas after 30 and 60 days of intervention. The higher the PSQI score was, the worse the sleep quality of the primiparas was.

(3) EPDS was used to evaluate the severity of maternal depression after 30 and 60 days of intervention. The higher the EPDS score was, the more severe the maternal depression was.

(4) The SDS was used to evaluate the degree of maternal mental health after 30 and 60 days of intervention. The higher the SDS score was, the more severe the degree of maternal depression was.

1.5 Statistical Processing

The research data were processed and analyzed by SPSS19.0 software. The measurement data were measured by t test, expressed by ($\bar{x}\pm s$), and the count data were tested by X^2, expressed by [n (%)]. The difference was statistically significant when $p<0.05$.

2. Results

2.1 Analysis of HAMD-17 Scores Before and After Maternal Intervention in Both Groups of Primiparas

After intervention, the HAMD-17 scores of primiparas in both groups significantly decreased, and the HAMD-17 scores of primiparas in the test

group were significantly lower than those of the control group, with statistical significance ($P<0.01$), as shown in Table 3.

Table 3. **HAMD-17 Scores Before and After Maternal Intervention**

Group	Test group		Control group		t^*	p^*
	Before intervention	After intervention	Before intervention	After intervention		
Anxiety	8.38±1.05	2.95±0.32*	8.34±1.06	4.13±0.61*	12.11	0.00
Sleep disorder	5.73±0.68	2.22±0.26*	5.75±0.69	3.64±0.42*	20.33	0.00
Despair	5.76±0.67	2.08±0.22*	5.73±0.62	3.87±0.45*	25.27	0.00
Block	10.08±1.12	4.65±0.04*	10.05±1.11	7.29±0.08*	208.71	0.00
Day and night	2.94±0.29	0.65±0.09*	2.96±0.28	1.18±0.31*	11.61	0.00
Body mass	1.81±0.24	0.18±0.21*	1.87±0.19	0.75±0.08*	17.94	0.00
Cognitive impairment	13.42±1.63	6.15±0.07*	13.41±1.64	8.19±1.04*	13.84	0.00

2.2 Analysis of EPDS, PSQI and SDS scores in Both Groups of Puerperae

There were no significant differences in EPDS, PSQI and SDS scores between the two groups of primiparas before intervention. After 30 and 60 days of intervention, the EPDS scores (13.33±1.65, 11.75±1.32), PSQI scores (7.51±0.08, 5.98±0.06) and SDS scores (54.85±6.25, 43.32±4.85) of the test group were significantly lower than (14.58±1.79, 12.81±1.39), (8.74±1.04, 6.88±0.09) and (63.02±7.61, 50.42±5.54) of the control group, with statistical significance (t=3.63, 3.91, 8.34, 58.83, 5.86, 6.82; p=0.00, 0.00, 0.00, 0.00, 0.00, 0.00), as shown in Figures 1-3.

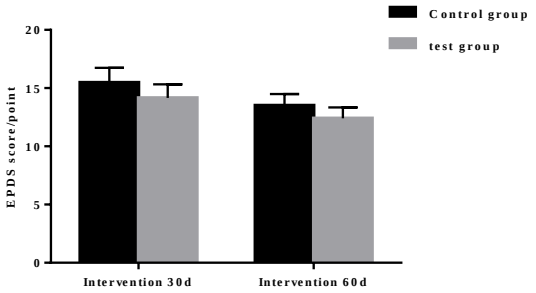

Figure 1. **Comparison of EPDS scores between the two groups after maternal intervention 30 days and 60 days**

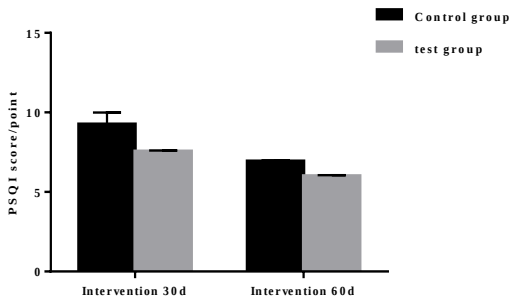

Figure 2. **Comparison of PSQI scores of the two groups of maternal intervention after 30 days and 60 days**

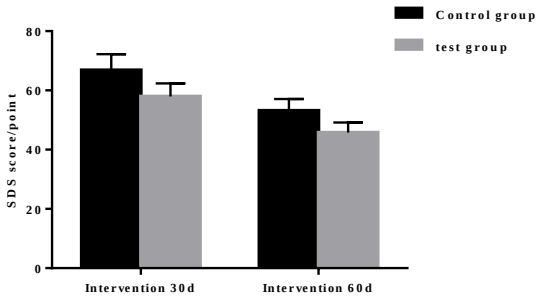

Figure 3. **Compare the SDS scores of the two groups of maternal intervention after 30 days and 60 days**

Note: In Figure 1, the abscissa represented the intervention 30d and 60d respectively, and the ordinate represented EPDS score. As shown in Figure 1, the EPDS scores of the test group were significantly lower than those of the control group at intervention 30d and 60d. Unit: points

In Figure 2, the abscissa represented the intervention 30d and 60d respectively, and the ordinate represented PSQI score. As shown in Figure 2, the PSQI scores of the test group were significantly lower than those of the control group at intervention 30d and 60d. Unit: points

In Figure 3, the abscissa represented the intervention 30d and 60d respectively, and the ordinate represented SDS score. As shown in Figure 3, the SDS scores of the test group were significantly lower than those of the control group at intervention 30d and 60d. Unit: points

3. Discussion

Nowadays, the pathological mechanism of maternal postpartum depression is still unclear but maternal family, education level and mental status are all related to the pathogenesis of postpartum depression(SUSAN et al., 2020; Shirin et al., 2019; Tara et al., 2019). Especially primiparas, due to the first experience of childbirth, have great changes in psychology and physiology with adverse emotions, and some even have depression. Relevant studies have pointed out that postpartum depression is not only detrimental to the life quality of primiparas,

but also adversely affects the growth and development of newborns. Postpartum depression generally occurs at 30 days after delivery but most primiparas have clinical manifestations 15 days after delivery, including anxiety, pessimism and depression, etc., which seriously affect the diet and sleep of primiparas. Some primiparas also have mastitis, hypogalactia and other conditions(Iram et al., 2019; Verinder et al., 2020; Sandhya et al., 2019). With the increasing incidence of postpartum depression year by year, how to reduce the occurrence of postpartum depression and improve the health of primiparas and newborns has become the focus of discussion in obstetric care nowadays.

According to Corey K (Corey et al., 2019) et al., relaxation training plays a positive role in regulating maternal psychological and physical health, and promoting the recovery of postpartum depression. Relaxation training is a nursing intervention to promote maternal physical and mental comfort and relaxation. Under the guidance of nursing staff, relaxation training for primiparas is conducive to alleviating maternal adverse psychology. Postpartum recovery training is a way to help primiparas recover their physiology and psychology, which can promote recovery of maternal body, improve self-care ability, adjust mental state and regulate endocrine function to alleviate their pain of breastfeeding by managing their activities, diet and pain, etc. TCM records that women consume a large amount of Qi and blood during pregnancy and childbirth, and requires sufficient Qi and blood for postpartum recovery. Without proper care, primiparas will have disorders of Qi activity and emotional depression. Therefore, to prevent postpartum depression, it is necessary to pay attention to the maternal physical and mental health. As a kind of physical massage, TCM acupoint nursing can regulate maternal body and mind. The study of Marn-Morales (Marín-Morales et al., 2018) et al. shows that it is necessary to implement psychological and physiological intervention for postpartum depressed primiparas, preventing the postpartum depression. In this study, in order to analyze the effect of TCM nursing combined with relaxation training and postpartum recovery training on postpartum depression of primiparas, the control group received conventional nursing intervention while the test group received TCM intervention combined with relaxation training and postpartum recovery training. The results showed that the HAMD-17 scores of primiparas in the test group were significantly lower than those of the control group ($P<0.01$), indicating that TCM nursing intervention combined with relaxation training and postpartum recovery training had a positive effect on improving the depression of primiparas. In order to further confirm the positive effect mentioned above, EPDS and SDS were also applied in this study to analyze the maternal depression situation. EPDS over 13 points indicated that the primiparas had postpartum depression, and the higher the score was, the higher the depression degree of primiparas was. This study found that after 30 and 60 days of intervention, the EPDS and SDS scores of the test group were significantly lower than those of the control group ($P<0.01$), indicating that TCM intervention combined with relaxation training and postpartum recovery training significantly improved the postpartum depression of the primiparas.

Postpartum depressed primiparas are prone to sleep disorders due to deficiency of the liver blood, damage of heart and spleen, emotional distress and excessive anxiety. According to “The effect of sleep pattern changes on postpartum depressive symptoms” written by Lewis B A (Lewis et al., 2018) et al., it could be seen that sleep quality was related with maternal postpartum depression. This study found that after 30 and 60 days of intervention, the sleep quality was better in primiparas intervened by TCM combined with relaxation training and postpartum recovery training than that sby conventional nursing, which proved that TCM combined with relaxation training and postpartum recovery training had a positive effect on improving the bad psychology, alleviating internal pressure and enhancing the sleep quality in primiparas.

In conclusion, TCM combined with relaxation training and postpartum recovery training not only improves the postpartum depression of primiparas, but also has a positive effect on alleviating bad psychology and improving sleep quality in primiparas.

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