Alpha Psychiatry

ORIGINAL ARTICLE
Alpha Psychiatry 2024;25(5):569-576
DOI: 10.5152/alphapsychiatry.2024.241518

Psychological Treatment Options for Patients with Mild to Moderate Depression Undergoing Hemodialysis: TCM-Related Emotion-Thought Therapy

ABSTRACT

Objective: To assess the effect of Chinese medicine affective therapy on psychotherapy for mild to moderate depression in hemodialysis patients, and to provide a reference basis for clinical practice.

Methods: Clinical data (January 2021—January 2023) from the Fourth Affiliated Hospital of Nanchang University were retrospectively analyzed. Patients were divided into control (routine care) and observation (routine care + Chinese medicine affective therapy) groups. The data of anxiety self-assessment scale (SAS), self-rating depression scale (SDS), pittsburgh sleep quality index (PSQI), general well-being scale (GWB) and Health Questionnaire (SF-36) were compared between the two groups.

Results: PSM matched 80 patients each in observation and control groups, showing no significant baseline differences. Pre-care scores (SAS, SDS, PSQI, GWB, SF-36) had no notable discrepancies ($P > .05$). Post-care, SAS, SDS, PSQI were lower in the observation group ($P < .05$), while GWB and SF-36 scores were higher ($P < .001$). The SAS, SDS, and PSQI scores were lower in the observation group relative to the control group after care (All *P*-values were < .05), whereas the GWB and SF-36 score scores of the observation group were higher than those of the control group (All *P*-values were < .05).

Conclusion: Traditional Chinese Medicine (TCM) affective therapy may be able to improve the quality of sleep, quality of life, and general well-being of hemodialysis patients with mild-to-moderate depression, as well as alleviate the patients' adverse emotions.

Keywords: Depression, hemodialysis, traditional Chinese medicine, psychotherapy

Introduction

Hemodialysis is one of the common ways of blood purification, and it is the most important kidney substitute diagnosis and treatment method for patients with end-stage renal disease in clinical practice. It can reduce or eliminate clinical symptoms of patients and prolong their survival time, but it will cause a decline of patients' immune function and nutritional status, resulting in severe physiological discomfort and the high cost of dialysis on patients and their families. Due to the influence of neurobiological and psychosocial factors, the incidence of depression in patients with end-stage renal disease is as high as 38.50%.[1-3] Depression is a mental disorder with a high prevalence rate, which is usually clinically manifested as despair and anxiety, accompanied by serious suicide attempts or even suicidal behaviors, posing a serious threat to the health of patients.[4-6] Therefore, it is essential to conduct effective nursing care for patients undergoing hemodialysis complicated with depression.[7]

Conventional nursing care is a traditional clinical nursing care mode, which can effectively provide patients with basic needs. However, due to a variety of influencing factors such as long treatment cycles, high difficulty, drug instability, and poor compliance, conventional nursing care has a poor effect.[8-9] With the development of traditional Chinese medicine (TCM), TCM therapy has been widely used in clinical practice. TCM is a traditional Chinese

Fang Xu[1]
Yuanhui Chen[2]
Xuehong Wu[2]
Hanmei Duan[2]
Yaliang Zhang[2]

[1]*Department of Traditional Chinese Medicine, The Fourth Affiliated Hospital, Jiangxi Medical College, Nanchang University, Nanchang, Jiangxi, China*
[2]*Department of Nephrology, The Fourth Affiliated Hospital, Jiangxi Medical College, Nanchang University, Nanchang, Jiangxi, China*

Corresponding author:
Yaliang Zhang
✉ zyl860110@163.com

Received: January 8, 2024
Revision Requested: February 5, 2024
Last Revision Received: April 18, 2024
Accepted: April 26, 2024
Publication Date: October 28, 2024

Cite this article as: Xu F, Chen Y, Wu X, Duan H, Zhang Y. Psychological treatment options for patients with mild to moderate depression undergoing hemodialysis: TCM-related emotion-thought therapy. *Alpha Psychiatry.* 2024;25(5):569-576.

medical system whose main idea is people-oriented and emphasizes the holistic concept of patients. Traditional Chinese medicine considers depression as "depression "syndrome," "insomnia," "amnesia," and other categories, and relevant studies believe that emotions play a crucial role in the treatment of depression. Emotional therapy in traditional Chinese medicine is a treatment method. Emotions are closely related to human health, and emotional overreaction and negativity cause Qi and blood disorders in patients, leading to various diseases. Therefore, based on releasing patients' inner depression, it advocates guiding patients' mental and physical health concepts, adjusting emotions, and maintaining peace of mind to achieve the effect of treating diseases and strengthening health.[10-11] Some clinical studies have found that the application of TCM emotional therapy in the clinical treatment of elderly patients with alcohol-dependent depression can effectively improve the quality of life of patients and relieve their negative emotions, with significant effects.[12] Yang Y et al[13] also conducted clinical research and applied TCM emotional therapy to patients with post-stroke depression to improve their quality of life and mental state. The compliance was improved. It shows that TCM emotional therapy has a high value in clinical application.

At present, TCM emotional therapy has been widely used in clinical diagnosis and treatment, but there are few applications and little research on the use of TCM emotional therapy in patients undergoing hemodialysis complicated with depression. Therefore, this study selected clinical data of patients with mild to moderate depression who received hemodialysis in our hospital from January 2021 to January 2023 to carry out a retrospective analysis to explore the influence of TCM emotional therapy on such patients. It is reported as follows:

Material and Methods

Research Object

The clinical data of 130 patients with mild to moderate depression undergoing hemodialysis, treated in the Fourth Affiliated Hospital of Nanchang University from January 2021 to January 2023, were retrospectively analyzed. The control group received a conventional nursing care mode, while the observation group received TCM-related emotion-thought therapy in addition to conventional nursing care. Baseline data were collected, including gender, age, educational level, marital status, monthly income, occupation, body mass index, place of residence, dialysis duration, complications, and family history of mental illness. Inclusion criteria: (1) Patients whose self-rating depression scale (SDS) scores were 53 to 72[14]; (2) Age ≥18 years old; (3) Patients with complete clinical data; (4) Patients and their families provided informed consent and had them sign consent forms. Exclusion criteria: (1) Patients with severe diseases of vital organs such as the lungs, liver, heart, and brain; (2) Patients with severe cognitive impairment; (3) Children, pregnant, or lactating women; (4) Patients using antidepressant or insomnia drugs; (5) Patients not fully involved in the research. Respondents' overall well-being, health status, anxiety level, depression status, and sleep quality were evaluated using consistent methods before and after nursing care, irrespective of the type of nursing received.

This study is in line with the Declaration of Helsinki. This was a retrospective cohort inquiry, and informed consent was not required due to the anonymous nature of the data. This study has been approved by the Ethics Committee of The Fourth Affiliated Hospital, Jiangxi Medical College, Nanchang University (Approval No.: SFYYXLL-PJ-2022-KY036).

Control Group

Control group patients received routine nursing care. The specific operations are as follows: (1) Patients underwent regular maintenance hemodialysis, 2 to 3 times per week, 4 to 5 hours each time, intra-arterial fistula puncture to establish hemodialysis access. Patients were provided routine diagnosis and treatment, such as blood pressure control, anemia correction, and regulation of calcium and phosphorus metabolism, according to their clinical symptoms; (2) To use therapeutic drugs regularly and quantitatively according to doctor's advice. Medical staff emphasized the importance of these drugs in the diagnosis and treatment of diseases to prevent patients from stopping or changing drugs, which could result in adverse effects; (3) Depending on patients' educational levels, appropriate health publicity was carried out and disease-related publicity brochures were issued to improve patients' knowledge about their conditions; (4) Communicate more with patients' families to promote their support and improve patients' confidence; (5) Ensure the patient's daily normal intake of dietary fiber, advised them to drink adequate water every day, and made corresponding diet plans, mainly light diet, to improve the patient's life quality of life; (6) Encourage and guide the patient to participate in sports or other activities to enhance the patient's interest in other things and divert the patient's attention; (7) Closely monitor changes in patients' vital signs were closely monitored for any changes.

Observation Group

Based on routine nursing care, patients in the observation group were treated with traditional Chinese emotional therapy, which mainly consisted of four steps: dredging, catharsis, and guidance. Specific measures were as follows: (1) Two attending physicians, a professional psychological counselor, and several nursing staff were selected to form a TCM effective nursing care team. The nursing staff were trained in TCM effective therapy, including the four-step approach of language channeling, and were assessed after the training. Only those who passed the assessment were allowed to take up the practical work. (2) Encouraging the patients: A fixed place for Chinese medicine emotion and spirit care was set up. Through reviewing relevant clinical information, collecting detailed cases of

MAIN POINTS

- *The study demonstrates that Chinese medicine affective therapy, when used in conjunction with routine care, significantly improves the quality of sleep, quality of life, and general well-being of hemodialysis patients with mild-to-moderate depression.*
- *Patients receiving Chinese medicine affective therapy showed significantly lower scores on the anxiety self-assessment scale (SAS) and self-rating depression scale (SDS) compared to those receiving only routine care, indicating a potential reduction in adverse emotions.*
- *The observation group exhibited higher scores on the general well-being scale (GWB), and Health Questionnaire (SF-36) post-care, suggesting that Chinese medicine affective therapy may have a positive impact on both psychological and physical well-being in hemodialysis patients with depression.*

patients, and introducing the hemodialysis method, precautions, effects, and the importance of emotion and spirit therapy, we aim to correct the patient's wrong cognition and improve the patient's negative emotions were improved. In addition, patients were encouraged to communicate with each other and establish a respectful and trusting relationship between doctors and nurses, so that they could consciously harmonize their emotions and actively cooperate with diagnosis and treatment. (3) Helping patients to answer questions and relieve their emotions: Patients were brought to the conversation room, where they were guided to express their doubts and understandings to eliminate the patients' psychological concerns. At the same time, to change the patient's mode of thinking with examples of successful cases, establishing and strengthening the patient's confidence. Guide the patient to talk about their state of life, psychological experiences, and growth experience, etc., to understand their actual psychological state. They were also led to use various scientific methods, such as tears, crying, shouting, etc., to ventilate their negative emotions. (4) Adopting the method of transferring feelings and emotions to achieve favorable results: By collecting patients' interests, they were encouraged to establish hobbies, such as playing chess, painting, and more, to improve patients' attention to enjoyable activities. Patients were guided to observe more wonderful things in life, to shift the focus of the patient's attention. In addition, when patients ventilated reasonably, they were allowed to watch humorous TV programs and were encouraged to communicate positively with their families, medical staff, and fellow patients to establish good interpersonal relationships. This promoted correct attitudes towards life and difficulties, enabled them to witness more beautiful things, and utilized the effect of the seven positive emotions to stimulate the patients' bright memories of their lives through the method of "joy over sadness and sorrow". The patient's positive memories in life were stimulated through the "joy over sorrow" approach. The one therapy was administered once a week, 2 hours each time, for 8 times for 1 course of treatment, with a total of 2 courses.

Observation Indicators

The general well-being scale (GWB), Health Questionnaire (SF-36), self-assessment scale for anxiety (SAS), SDS, and Pittsburgh sleep quality index (PSQI) were compared between the two groups before and aftercare.

(1) Patients were evaluated using the SAS, which contained 20 items with 5 points for each item. The total score was 100, and 50 was the dividing line. Below 50 means there was no anxiety, and above 50, the higher the score, the more serious the anxiety. Cronbach's α coefficient and half-validity coefficient were 0.835 and 0.851, respectively. SDS was used to evaluate patients' depressive moods. The scale contained 20 items with 5 points for each item, with a total score of 100, and 53 was the dividing line. When the score was lower than 53, there was no depression; 53 to 62 was mild depression, 62 to 72 was moderate depression, and above 72 was severe depression. Cronbach's α coefficient was 0.884.[15]

(2) PSQI was used to evaluate patients' sleep quality. The scale included six dimensions, including patients' subjective sleep, time to fall asleep, sleep efficiency, factors related to sleep disorders, sleep duration, and whether they took drugs, with 0 to 3 points for each dimension. The lower the score, the better the patients' sleep quality. Cronbach's α coefficient was 0.831.[16]

(3) GWB was adopted to evaluate the general well-being of patients. There were six dimensions: satisfaction and interest in life (15 points), worry about health (15 points), energy (25 points), depression and happiness (15 points), control of emotional behavior (15 points), relaxation and tension (15 points), and the total score was 100 points. The higher the score, the stronger the happiness of the patients. Cronbach's α coefficient was 0.910. Half-validity coefficient was 0.850.[17-18]

(4) SF-36 was used to evaluate patients, which mainly consisted of 8 dimensions including vitality, mental health, general health, social function, role-emotional, bodily pain, role-physical, and physical functioning. The full score of each item was 100, and the higher the score, the higher the quality of life of patients. Cronbach's α coefficient was 0.884.[19-20]

Statistical Methods

In this study, data were analyzed using SPSS 25.0 (IBM SPSS Corp.; Armonk, NY, USA) statistical software, with categorical data expressed using n (%) and the χ^2 test. The Fisher Freeman Halton test was employed when 20% of the expected frequency in the table is < 5. Owing to the limited sample size in this study, the normality of the data was assessed using the Shapiro–Wilk test. Measurement data were first tested for conformity to a normal distribution using the Shapiro–Wilk method. Those that conformed to a normal distribution were expressed using ($\bar{X} \pm$ S.D.) with the *t*-test, while non-normally distributed data were represented by Median (Q1-Q3), and between-group comparisons were conducted using the Wilcoxon rank-sum test, considering a statistically significant difference at $P < .05$.

Results

Comparison of General Data Between the Two Groups

There were age differences as well as body mass index differences between the two groups before matching ($P = .010$, $P = .005$). After matching, gender, age, educational level, marital status, monthly income, occupation, body mass index, place of residence, dialysis time, complications, family history of mental illness, and other general data of the two groups were the same ($P > .05$), and were comparable, as shown in Tables 1 and 2.

Comparison of SAS and SDS Scores

There was no significant difference in SAS and SDS scores between the two groups before care ($P = .986$, $P = .956$), while SAS and SDS scores of the observation group were lower than those of the control group after care ($P = .009$, $P = .005$), as shown in Table 3.

Comparison of Sleep Quality

There were no significant differences in the scores of subjective sleep quality, fall asleep time, sleep efficiency, factors related to sleep disorders, sleep duration, and whether or not medication was taken between the two groups before care (all $P > .05$). The various scores of sleep quality in the observation group were lower than those in the control group aftercare ($P < .001$), and the sleep disorder factor was different between the two groups after nursing ($P = .004$), as shown in Table 4.

Comparison of Subjective Well-Being

There was no significant difference in the scores of contentment and interest in life, concerns about health, energy, a melancholy or cheerful mood, control of emotional behavior, and relaxation and tension between the two groups before care ($P = 0.656$, $P = .922$, $P = .947$,

Table 1. Comparison of General Data Between the Two Groups Before Matching

Indicator			Control Group (n = 60)	Observation Group (n = 70)	*P*
Gender (n, %)	Male		40 (66.67)	50 (71.43)	.558
	Female		20 (33.33)	20 (28.57)	
Age (yr)			64.85 ± 6.81	68.00 ± 6.82	.010
Educational level (n, %)	Primary and below		14 (16.47)	19 (27.14)	.617
	Junior high school		20 (33.33)	25 (35.71)	
	High school		12 (20.00)	16 (22.86)	
	Junior college or above		14 (23.33)	10 (14.29)	
Marital status (n, %)	Married		55 (91.67)	62 (88.57)	.558
	Unmarried		5 (8.33)	8 (11.43)	
Occupation (n, %)	Enterprises and public institutions		17 (28.33)	26 (37.14)	.650
	Worker		10 (16.67)	13 (18.57)	
	Peasant		16 (26.67)	16 (22.86)	
	Other		17 (28.33)	15 (21.43)	
Monthly income (n, %)	<3000 *yuan*		11 (18.33)	11 (15.71)	.821
	3000~5000 *yuan*		23 (38.33)	27 (38.57)	
	5000~7000 *yuan*		15 (25.00)	19 (27.14)	
	≥7000 *yuan*		16 (18.82)	13 (18.57)	
Duration of illness (yr)			2.00 (2.00,3.00)	3.00 (2.00,3.00)	.170
BMI (kg/m^2)			21.35 ± 2.17	22.47 ± 2.32	.005
Place of residence (n, %)	Urban		40 (66.67)	44 (62.86)	.651
	Rural		20 (33.33)	26 (37.14)	
Dialysis duration (mo)			38.25 ± 4.02	38.58 ± 4.12	.646
Family history of mental illness (n, %)		Yes	10 (16.67)	13 (18.57)	.777
		No	50 (83.33)	57 (81.43)	
Complications (n, %)		High blood pressure	23 (38.33)	32 (45.71)	.660
		Arrhythmia	16 (26.67)	15 (21.43)	
		Other	21 (35.00)	23 (32.86)	

BMI, Body Mass Index.

P = .885, *P* = .919, *P* = .885). All scores of subjective well-being were higher in the observation group than in the control group after care (*P* = .010, *P* = .002, *P* = .008, *P* < .001, *P* < .001, *P* < .001), see Table 5.

Comparison of Quality of Life

There was no significant difference in the scores of vitality, mental health, general health, social functioning, emotional functioning, bodily pain, physical functioning, and physiological functioning between the 2 groups before nursing care (*P* = .989, *P* = .989, *P* = .866, *P* = .928, *P* = .922, *P* = .972, *P* = .983, and *P* = .943). In contrast, the scores of each of the quality of life measures for the observation group were higher than those of the control group after nursing care (*P* = .001, *P* = .004, *P* = .001, *P* < .001, *P* = .001, *P* = .008, *P* = .003, *P* = .003). See Table 6.

After receiving nursing care, the scores of the respondents in Physiology, Physiological function, Bodily pain, Social function, Emotional function, Mental health, Vitality, and General Health increased (all *P*-values were <.001). This indicates an improvement in their overall well-being, health status, and mental health following nursing care; see details in Table 6.

Discussion

Hemodialysis patients usually have more severe disease development and need dialysis to prolong their survival time.[21] However, studies by Rahmani A[22-23] and other scholars have shown that the physical and mental burden of hemodialysis patients is relatively serious. Due to severe physiological discomfort and huge economic pressure caused by high dialysis costs, patients suffer from mild to moderate depression. Campbell D et al[24-26] found that depression is a common clinical disease in hemodialysis patients, with an incidence of up to 60.90%, usually manifested as low mood, despair, anhedonia, etc., which will not only lead to serious suicide attempts but even suicidal behavior. It has a serious impact on the diagnosis and treatment of diseases, subjective well-being, and quality of life of patients. Therefore, it is essential to adopt scientific and effective care for patients with mild to moderate depression. Hu M[27-28] et al. believe that emotional therapy in traditional Chinese medicine is a way to treat the psychological state of patients. It cares for patients by calming the mind and guiding the movement of *qi*, so that the patients can rationally vent and release their bad emotions, which has a high clinical effect. (1) Encouraging the patients: A fixed place for Chinese medicine emotion and spirit care was set up. Through reviewing relevant clinical information, collecting detailed cases of patients, and introducing the hemodialysis method, precautions, effects, and the importance of emotion and spirit therapy, we aim to correct the patient's wrong cognition and improve the patient's negative emotions were improved. (2) In addition, patients were encouraged to communicate with each other and establish a respectful and trusting relationship between doctors and nurses, so that they could consciously harmonize their emotions and

Table 2. Comparison of the General Data of Patients in the First Two Groups After Matching

Indicator			Control Group (n = 40)	Observation Group (n = 40)	*P*
Gender (n, %)	Male		25 (62.50)	27 (67.50)	.639
	Female		15 (37.50)	13 (32.50)	
Age (yr)			67.75 ± 6.89	67.65 ± 6.87	.948
Educational level (n, %)	Primary and below		7 (17.50)	6 (15.00)	.952
	Junior high school		9 (22.50)	11 (27.50)	
	High school		16 (40.00)	16 (40.00)	
	Junior college or above		8 (20.00)	7 (17.50)	
Marital status (n, %)	Married		37 (45.00)	36 (50.00)	1.000
	Unmarried		3 (25.00)	4 (22.50)	
Occupation (n, %)	Enterprises and public institutions		14 (35.00)	15 (37.50)	.909
	Worker		10 (25.00)	12 (30.00)	
	Peasant		7 (17.50)	6 (15.00)	
	Other		9 (22.50)	7 (17.50)	
Monthly income (n, %)	<3000 *yuan*		9 (22.50)	8 (20.00)	.910
	3000~5000 *yuan*		13 (32.50)	14 (35.00)	
	5000~7000 *yuan*		15 (37.50)	13 (32.50)	
	≥7000 *yuan*		3 (7.50)	5 (12.50)	
Duration of illness (yr)			3.00 (2.00,3.00)	3.00 (2.00,3.00)	.925
BMI (kg/m^2)			21.75 ± 2.21	21.88 ± 2.22	.794
Place of residence (n, %)	Urban		23 (57.50)	25 (62.50)	.648
	Rural		17 (42.50)	15 (37.50)	
Dialysis duration(months)			38.45 ± 4.10	38.48 ± 4.08	.974
Family history of mental illness (n, %)		Yes	5 (12.50)	6 (15.00)	.745
		No	35 (87.50)	34 (85.00)	
Complications (n, %)		High blood pressure	17 (42.50)	18 (45.00)	.886
		Arrhythmia	10 (25.00)	11 (27.50)	
		Other	13 (32.50)	11 (27.50)	

actively cooperate with diagnosis and treatment. (3) Helping patients to answer questions and relieve their emotions: Patients were brought to the conversation room, where they were guided to express their doubts and understandings to eliminate the patients' psychological concerns. At the same time, to change the patient's mode of thinking with examples of successful cases, establishing and strengthening the patient's confidence. Guide the patient to talk about their state of life, psychological experiences, and growth experience, etc., to understand their actual psychological state. They were also led to use various scientific methods, such as tears, crying, shouting, etc., to ventilate their negative emotions. (4) Adopting the method of transferring feelings and emotions to achieve favourable results: By collecting patients' interests, they were encouraged to establish hobbies, such as playing chess, painting, and more, to improve patients' attention to enjoyable activities. Patients were guided to observe more wonderful things in life, to shift the focus of the patient's attention. In addition, when patients ventilated reasonably, they were allowed to watch humorous TV programs and were encouraged to communicate positively with their families, medical staff, and fellow patients to establish good interpersonal relationships. This promoted correct attitudes towards life and difficulties, enabled them to witness more beautiful things, and utilized the effect of the seven positive emotions to stimulate the patients' bright memories of their lives through the method of "joy over sadness and sorrow". The patient's positive memories in life were stimulated through this approach.

The study of AlAwwa I et al[29] showed that patients with depression suffer from despair, pessimism, anxiety, and depression due to the influence of their illness. Moreover, due to the disorder of brain mechanisms and nervous functions of patients with depression, they find it difficult to fall asleep and wake easily, and their sleep quality would decline. It is necessary to find effective ways to care for patients to improve their bad moods and sleep quality. This study showed that the SAS, SDS, and sleep quality scores of the observation group were lower than those of the control group after the nursing care, indicating that the adoption of TCM effective therapy was effective in improving

Table 3. Comparison of SAS and SDS Scores (Score)

		SAS Score			SDS Scores		
Group	n	Before Nursing	After Nursing	Before-After Nursing	Before Nursing	After Nursing	Before-After Nursing
Observation group	40	74.58 ± 7.58	57.23 ± 5.73*	17.00 (17.00,18.00)	65.43 ± 6.57	55.70 ± 5.62*	10.00 (9.00,11.00)
Control group	40	74.55 ± 7.59	60.80 ± 6.17*	13.00 (15.00,17.00)	65.35 ± 6.44	59.48 ± 5.95*	6.00 (5.00,7.00)
P	–	.986	.009	< .001	.956	.005	< .001

In the " Before nursing " and " After nursing " tests of variance,* I < .05.
SAS, Subjective Assessment Scale; SDS, Self-rating Depression Scale.

Table 4. Comparison of Sleep Quality (Score)

		Subjective Sleep Quality			Fall Asleep Time			Sleep Duration		
Group	**n**	**Before Nursing**	**After Nursing**	**Before-After Nursing**	**Before Nursing**	**After Nursing**	**Before-After Nursing**	**Before Nursing**	**After Nursing**	**Before-After Nursing**
Observation Group	40	1.80 ± 0.40	1.125 ± 0.335	0.77 ± 0.12	2.00 ± 0.21	1.13 ± 0.33*	0.87 ± 0.15	2.13 ± 0.38	1.00 ± 0.10*	1.13 ± 0.21
Control group	40	1.83 ± 0.39	1.525 ± 0.506	0.30 ± 0.10	2.05 ± 0.39	1.75 ± 0.44*	0.31 ± 0.08	2.15 ± 0.36	1.43 ± 0.50*	0.72 ± 0.18
P	–	.735	<.001	<.001	.331	<.001	<.001	.809	<.001	<.001
Group	**n**	**Sleep Efficiency**			**Sleep Disorder Factor**			**Whether to Take Sleep Medication**		
Observation group	40	2.25 ± 0.41	1.15 ± 0.16*	1.10 ± 0.17	2.20 ± 0.41	1.05 ± 0.20*	1.15 ± 0.21	1.93 ± 0.56	1.03 ± 0.21*	0.90 ± 0.19
Control group	40	2.23 ± 0.48	1.63 ± 0.53*	0.60 ± 0.10	2.23 ± 0.42	1.28 ± 0.45*	0.95 ± 0.18	1.95 ± 0.55	1.53 ± 0.60*	0.42 ± 0.11
P	–	.842	<.001	<.001	.747	.004	<.001	.872	<.001	<.001

In the " Before nursing" and ""After nursing" tests of variance,* $P < .05$

Table 5. Comparison of Subjective Well-Being (Score)

		Satisfaction and Interest in Life			Health Concerns			Energy		
Group	**n**	**Before Nursing**	**After Nursing**	**Before-After Nursing**	**Before Nursing**	**After Nursing**	**Before-After Nursing**	**Before Nursing**	**After Nursing**	**Before-After Nursing**
Observation group	40	8.00 (7.00,9.00)	13.00 (12.00,14.00)*	4.93 ± 1.12	8.73 ± 0.91	12.63 ± 1.28*	3.90 ± 0.85	13.13 ± 1.32	20.95 ± 2.15*	7.82 ± 1.77
Control group	40	8.00 (7.00,9.00)	12.00 (11.00,13.00)*	4.05 ± 1.02	8.75 ± 0.92	11.75 ± 1.18*	3.00 ± 0.90	13.15 ± 1.35	19.68 ± 2.01*	6.53 ± 1.28
P	–	.656	.010	<.001	.922	.002	<.001	.947	.008	<.001
Group	**n**	**A melancholy or Cheerful Mood**			**Control of Emotional Behavior**			**Relaxation and Tension**		
Observation group	40	8.08 ± 0.92	11.18 ± 1.25*	3.10 ± 1.08	8.58 ± 0.87	12.18 ± 1.33*	3.60 ± 1.05	8.88 ± 0.90	13.00 (12.00,14.00)*	4.00 (3.00,5.00)
Control group	40	8.05 ± 0.93	10.13 ± 1.11*	2.08 ± 0.76	8.60 ± 0.88	10.35 ± 1.15*	1.75 ± 0.58	8.85 ± 0.95	10.00 (10.00, 11.00)*	2.00 (1.00,2.00)
P	–	.885	<.001	<.001	.919	<.001	<.001	.885	<.001	<.001

In the "Before nursing" and ""After nursing" tests of variance,* $P < .05$

Table 6. Comparison of Life Quality Scores (Score)

		Physiology		Physiological Function		Bodily Pain		Social Function	
Group	**n**	**Before Nursing**	**After Nursing**	**Before Nursing**	**After Nursing**	**Before Nursing**	**After Nursing**	**Before Nursing**	**After Nursing**
Observation group	40	60.25 ± 6.52	77.85 ± 7.67*	62.33 ± 6.58	78.85 ± * 7.90	59.33 ± 6.08	78.15 ± 7.85*	58.83 ± 5.95	78.88 ± 7.91*
Control group	40	60.23 ± 6.54	71.75. ± 7.25*	62.35 ± 6.59	73.75 ± 7.53*	59.10 ± 6.11	72.33 ± 7.54*	58.95 ± 5.94	72.43 ± 7.31*
P	–	.989	.001	.989	.004	.866	.001	.928	<.001
Group	**n**	**Emotional Function**		**Mental Health**		**Validity**		**General Health**	
Observation group	40	58.30 ± 5.85	79.93 ± 8.17*	60.40 ± 6.23	78.53 ± 7.92*	59.15 ± 6.08	78.10 ± 7.85*	61.23 ± 6.23	79.65 ± 8.01*
Control group	40	58.43 ± 5.94	73.98 ± 7.56*	60.45 ± 6.28	73.83 ± 7.42*	59.18 ± 6.11	72.80 ± 7.32*	61.33 ± 6.35	74.23 ± 7.56*
P	–	.922	.001	.972	.008	.983	.003	.943	.003
Group	**n**	**Aftercare—Beforecare**							
		Physiology	**Physiological Function**	**Bodily Pain**	**Social Function**	**Emotional Function**	**Mental Health**	**Validity**	**General Health**
Observation group	40	17.60 ± 2.15	16.52 ± 1.88	18.82 ± 1.95	20.05 ± 2.34	21.63 ± 2.22	18.13 ± 2.01	18.95 ± 1.91	18.42 ± 1.89
Control group	40	11.52 ± 1.58	11.40 ± 1.50	13.23 ± 1.57	13.45 ± 1.41	15.55 ± 1.88	13.38 ± 1.43	13.62 ± 1.48	12.90 ± 1.35
P	–	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

In the " Before nursing " and ""After nursing" tests of variance,* $P < .05$.

patients' anxiety, depression, and sleep quality compared with conventional nursing care. The reason is that patients with mild to moderate depression on hemodialysis suffer from persistent spontaneous depression, pessimism, despair, anxiety, and depression due to their condition, and there is a correlation between poor mental state and the sleep quality of patients, which will cause a decline of sleep quality. The observation group received traditional Chinese emotional therapy, including enlightening, explaining questions and solving puzzles, venting emotions, and guiding the patients to talk about recent problems, growth-related experiences, psychological experiences, and other aspects. Medical staff listened carefully and responded, allowing patients to rationally vent their emotions, improve their anxiety and depression, and divert their attention by cultivating their interest and enhancing their enthusiasm for life. This transfer of patients' way of thinking improved sleep quality. Wang X et al[30] have shown that due to diseases, physiological discomfort, and economic pressure, patients undergoing hemodialysis experience decreased enthusiasm for life, are full of despair, lose interest in things, have reduced subjective well-being, and decreased quality of life, which affects the diagnosis and treatment of patients' diseases. In this study, the quality of life and subjective well-being scores of the observation group were higher than those of the control group after the nursing care, indicating that TCM effective therapy can strengthen the quality of life of patients and enhance their subjective well-being compared to simply adopting conventional nursing care. Quality of life is the patient's subjective feelings about all aspects of life, including material life, physical function, and other aspects, which can effectively reflect their physiological, psychological, and social adaptation. Happiness is a psychological feeling of satisfaction and freedom. Patients with mild to moderate depression lose interest in life due to various factors such as illness, reducing patients' satisfaction, happiness, and quality of life. The observation group in this study adopted traditional Chinese medicine sentiment therapy, which involved transferring the sentiment, the method of winning by sentiment, consulting clinical data, collecting patients' detailed cases, mastering the development of patients' conditions, and explaining disease-related knowledge. They guided patients to shed tears and cry to excrete bad emotions; held activities such as playing chess and painting to cultivate patients' interest, strengthen patients' perception of life, and improve patients' enthusiasm and hope for life. They also guided patients to recall good memories in life, strengthen patients' confidence in life, and effectively improved the quality of life. Alzahrani N[31] et al believe that depression, anxiety, and other adverse emotions affect the clinical diagnosis and treatment of patients, and effective nursing care for patients with adverse emotions can effectively improve the quality of life of patients, which is consistent with the above research results.

Conclusion

In conclusion, TCM-related emotion-thought therapy for patients with mild to moderate depression combined with hemodialysis can improve their depression and anxiety, improve their sleep quality, increase their overall happiness, and effectively improve their quality of life. Therefore, TCM affective therapy has application value in clinical settings, deserving of larger-scale clinical practice and research.

Data Availability Statement: *The data that support the findings of this study are available on request from the corresponding author.*

Ethics Committee Approval: *This study was approved by the Ethics Committee of The Fourth Affiliated Hospital, Jiangxi Medical College, Nanchang University. Approval No.: SFYYXLL-PJ-2022-KY036.*

Informed Consent: *Written informed consent was obtained from the patients/patient who agreed to take part in the study.*

Peer-review: *Externally peer-reviewed.*

Author Contributions: *Concept – F.X.; Design – F.X., Y.Z.; Supervision – Y.C., X.W.; Materials – F.X., Y.C., X.W., Y.Z.; Data Collection and/or Processing – F.X., Y.Z.; Analysis and/or Interpretation – F.X., X.W., H.D., Y.Z.; Literature Search – F.X., X.W., H.D., Y.Z.; Writing Manuscript – F.X., Y.C., H.D., Y.Z.; Critical Review – Y.C., X.W.*

Acknowledgments: *N/A.*

Declaration of Interests: *The authors have no conflict of interest to declare.*

Funding: *The authors declared that this study has received no financial support.*

References

1. Fu L, Wu Y, Zhu A, Wang Z, Qi H. Depression of caregivers is significantly associated with depression and hospitalization of hemodialysis patients. *Hemodial Int*. 2022;26(1):108-113. [CrossRef]
2. Barello S, Anderson G, Acampora M, et al. The effect of psychosocial interventions on depression, anxiety, and quality of life in hemodialysis patients: a systematic review and a meta-analysis. *Int Urol Nephrol*. 2023;55(4):897-912. [CrossRef]
3. Daniel SC, Azuero A, Gutierrez OM, Heaton K. Examining the relationship between nutrition, quality of life, and depression in hemodialysis patients. *Qual Life Res*. 2021;30(3):759-768. [CrossRef]
4. Khoury R, Ghantous Z, Ibrahim R, et al. Anxiety, depression and post-traumatic stress disorder in patients on hemodialysis in the setting of the pandemic, inflation, and the Beirut blast: a cross-sectional study. *BMC Psychiatry*. 2023;23(1):284. [CrossRef]
5. Al-Shammari N, Al-Modahka A, Al-Ansari E, et al. Prevalence of depression, anxiety, and their associations among end-stage renal disease patients on maintenance hemodialysis: a multi-center population-based study. *Psychol Health Med*. 2021;26(9):1134-1142. [CrossRef]
6. Wen KS, Zheng W. Optimization strategies of transcranial magnetic stimulation in major depressive disorder. *Alpha Psychiatry*. 2023;24(6):270-272. [CrossRef]
7. Meng Y, Wu HT, Niu JL, et al. Prevalence of depression and anxiety and their predictors among patients undergoing maintenance hemodialysis in Northern China: a cross-sectional study. *Ren Fail*. 2022;44(1):933-944. [CrossRef]
8. da Silva FA, Silva Martins MT, Gutiérrez-Peredo GB, et al. Mortality, health-related quality of life, and depression symptoms in younger and older men and women undergoing hemodialysis. *Int J Artif Organs*. 2023;46(8-9):492-497. [CrossRef]
9. Feng ST, Wang XL, Wang YT, et al. Efficacy of traditional Chinese medicine combined with selective serotonin reuptake inhibitors on the treatment for Parkinson's disease with depression: a systematic review and meta-analysis. *Am J Chin Med*. 2021;49(3):627-643. [CrossRef]
10. Ye J, Cai S, Cheung WM, Tsang HWH. An east meets west approach to the understanding of emotion dysregulation in depression: from perspective to scientific evidence. *Front Psychol*. 2019;10:574. [CrossRef]
11. Da XL, Yue LF, Li XJ, Chen JB, Yuan NJ, Chen JX. Potential therapeutic effect and methods of traditional Chinese medicine on COVID-19-induced depression: a review. *Anat Rec (Hoboken)*. 2021;304(11):2566-2578. [CrossRef]
12. Zhao F, Tong X, Wang C. Acupuncture combined with emotional therapy of Chinese medicine treatment for improving depressive symptoms in

elderly patients with alcohol dependence during the COVID-19 epidemic. *Front Psychol*. 2021;12:635099. [CrossRef]
13. Yang Y, Zhang M, Zhao J, Song S, Hong F, Zhang G. Effect of traditional Chinese medicine emotional therapy on post-stroke depression: a protocol for systematic review and meta-analysis. *Med (Baltim)*. 2021;100(14):e25386. [CrossRef]
14. Niu Y, Liu Y, Ren S. Investigation on anxiety and depression of different populations in the area with low incidence of new coronavirus pneumonia and analysis of related factors. *Pak J Med Sci*. 2023;39(2):380-384. [CrossRef]
15. Pei F, Hu WJ, Mao YN, Zhao YL. The efficacy of acupuncture combined with Bailemian capsule in the treatment of cervical spondylosis accompanied by headache, anxiety, and depression. *Explore (NY)*. 2022;18(5):533-538. [CrossRef]
16. Hayashino Y, Yamazaki S, Takegami M, Nakayama T, Sokejima S, Fukuhara S. Association between number of comorbid conditions, depression, and sleep quality using the Pittsburgh Sleep Quality Index: results from a population-based survey. *Sleep Med*. 2010;11(4):366-371. [CrossRef]
17. Gong Y, Zhang L, Long J, et al. Feasibility of a brief intervention to decrease harmful alcohol use among methadone maintenance treatment clients in shanghai: a randomized controlled trial. *J Addict Med*. 2023;17(3):294-299. [CrossRef]
18. Hu YY, Jiang X, Mao FY, et al. Effect of positive event recording based on positive psychology on healthy behaviors and readmission rate of patients after PCI: a study protocol for a prospective, randomized controlled trial. *Trials*. 2022;23(1):1-11.
19. Longo UG, De Salvatore S, Greco A, et al. Influence of depression and sleep quality on postoperative outcomes after total hip arthroplasty: a prospective study. *J Clin Med*. 2022;11(13):3845. [CrossRef]
20. Wong A, Ye JY, Cook RJ, Gladman DD, Chandran V. Depression and anxiety reduce the probability of achieving a state of sustained minimal disease activity in patients with psoriatic arthritis. *Arthritis Care Res*. 2022;74(9):1430-1434. [CrossRef]
21. Gündoğdu S, Arikan F, Pekesen M, Yildirim Y, Aykar FŞ. Examination of depression and perceived social support levels and affecting factors in hemodialysis patients. *Ege Tıp Derg*. 2023;62(2):224-233. [CrossRef]
22. Rahmani A, Maleki V, Niknafs B, Tavakoli-Rouzbehani OM, Tarighat-Esfanjani A. Effect of Nigella sativa supplementation on kidney function, glycemic control, oxidative stress, inflammation, quality of life, and depression in diabetic hemodialysis patients: study protocol for a double-blind, randomized controlled trial. *Trials*. 2022;23(1):111. [CrossRef]
23. Lilliecreutz C, Josefsson A, Mohammed H, Josefsson A, Sydsjö G. Mental disorders and risk factors among pregnant women with depressive symptoms in Sweden–A case-control study. *Acta Obstet Gynecol Scand*. 2021;100(6):1068-1074. [CrossRef]
24. Campbell D, Green MJ, Davies N, et al. Effects of depression on employment and social outcomes: a Mendelian randomisation study. *J Epidemiol Community Health*. 2022;76(6):563-571. [CrossRef]
25. Hakulinen C, Böckerman P, Pulkki-Råback L, Virtanen M, Elovainio M. Employment and earnings trajectories before and after sickness absence due to major depressive disorder:a nationwide case–control study. *Occup Environ Med*. 2020;78(3):173-178. [CrossRef]
26. Zaidi SMJ, Kaneez M, Awan J, et al. Sleep quality and adherence to medical therapy among hemodialysis patients with depression:a cross-sectional study from a developing country. *BJPsych Open*. 2021;7(suppl1):S43-S43.
27. Hu MZ, Wang AR, Zhao ZY, Chen XY, Li YB, Liu B. Antidepressant-like effects of paeoniflorin on post-stroke depression in a rat model. *Neurol Res*. 2019;41(5):446-455. [CrossRef]
28. Jalali A, Firouzabadi N, Zarshenas MM. Pharmacogenetic-based management of depression: role of traditional Persian medicine. *Phytother Res*. 2021;35(9):5031-5052. [CrossRef]
29. AlAwwa I, Ibrahim S, Obeid A, et al. Comparison of pre-and post-hemodialysis PHQ-9 depression scores in patients with end-stage renal disease: a cross-sectional study. *Int J Psychiatry Med*. 2021;56(6):433-445. [CrossRef]
30. Wang X, Xia F, Wang G. Mediating effect of anxiety and depression between family function and hope in patients receiving maintenance hemodialysis: a cross-sectional study. *BMC Psychol*. 2023;11(1):130. [CrossRef]
31. Alzahrani N. The effect of hospitalization on patients' emotional and psychological well-being among adult patients: An integrative review. *Appl Nurs Res*. 2021 Oct;61:151488. doi: [CrossRef].