

Research on the Intervention Effect of Five Elements Music on the Negative Emotions of Nurses in Oncology Department

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ABSTRACT

In the context of the new crown pneumonia epidemic, nurses, as an important force in the fight against the epidemic, have received extensive attention from all walks of life. At the same time, under the high-intensity work, the psychological problems of nurses are becoming more and more obvious, which has attracted the attention of researchers. This study aimed to investigate the negative emotion level of nurses in the oncology department, and to explore the effect of five-element music on the negative emotion of nurses in the department of oncology. The research found that it is significantly useful to use five-element music to intervene nurses of the oncology department, which can effectively alleviate the nurses' negative emotions such as anxiety and depression. Further, five-element music is beneficial to relieve nurses' negative emotions of nurses, so it can improve the level of their mental health.

Keywords: *Mental Health, Negative Emotion, Five Elements of Music, Oncology Nurses*

1. INTRODUCTION

As the backbone of hospital care, nurses are the bridge between patients and doctors. Among medical staff, the negative emotion of nurses is significantly higher than that of doctors and medical technicians [1]. The special working environment of oncology nurses leads to long-term exposure to higher occupational risks, which makes the work pressure of oncology nurses significantly higher than that of general medical and surgical nurses, and is more likely to cause negative emotions. High-pressure and high-intensity work will increase nurses' negative emotions and willingness to leave. The study found that five-element music therapy has been recognized by many scholars due to its advantages such as less side effects, simple treatment methods, and lower requirements. Five-element music has a good effect in effectively improving the negative emotions of patients and nurses and improving sleep quality. This study investigated the negative emotions of oncology nurses, and used five elements of music to intervene on the negative emotions of oncology nurses,

and achieved certain results, hoping to provide some reference for nursing management.

2. LITERATURE REVIEW

2.1 Overview of Negative Emotions

2.1.1 Definition of Negative Emotions

Negative emotion refers to a negative emotional response that is harmful or contradictory to someone's values, beliefs, and rights [2]. Negative emotions include anxiety, depression, sadness, pain, etc., which are manifested as increased awareness, inattention, emotional instability, irritability and other psychological states, as well as various physical symptoms.

2.1.2 Current status of negative emotions among nurses in the oncology department

The study found that the scores of depression, anxiety, and hostile symptom factors of oncology nurses

were significantly higher than those of nurses in other departments [3]. The work pressure is significantly higher than that of general medical and surgical nurses, and it is more likely to cause negative emotions. In addition, some scholars found in a stressor survey that the scores of "workload and time allocation problems" and "patient care problems" of oncology nurses were significantly higher than those of other clinical nurses, which indicated that the work intensity of oncology nurses was far greater than that of nurses in other clinical departments. Beyond other departments, high-pressure and high-intensity work will increase the negative emotions and resignation intentions of nurses. A survey conducted by Gan Yiqin shows that 77.8% of nurses in the oncology department have resignation intentions, of which 14.8% have strong resignation intentions [4]. Sexual emotions have a negative impact on the degree of nursing work commitment and the stability of nursing personnel.

2.1.3 Negative emotion intervention methods for oncology nurses

Many scholars have conducted intervention studies on the negative emotions of nurses in the oncology department. Minglu found that through background music therapy, nurses' anxiety and depression were significantly improved after intervention compared with those before intervention, and they were better than those in the control group [5]. Cognitive behavioral therapy has also been proved to be one of the effective methods [3]. In addition, oncology nurses have a certain effect in reducing negative emotions through the mind studio [6]. However, as an important branch of traditional Chinese medicine, five-tone therapy has the advantages of being safe, green, and easily accepted by patients. Studies have shown that it has a good clinical effect on improving the degree of depression in depression, and it is also in line with the concept of traditional Chinese medicine. It has a unique role in chi-related diseases.

2.2 Pentatonic therapy

2.2.1 Definition of pentatonic therapy

Five-element music therapy (that is, five-tone therapy) is a common emotional mediation method in ancient my country. The five-element music therapy of traditional Chinese medicine was first proposed in the

2.2.2 Intervention effect of pentatonic therapy on negative emotions

Studies have found that five-tone therapy has a good intervention effect on depression and anxiety. Chen Jianrong's intervention in patients with depression found that compared with drug intervention, five-tone therapy is more effective [7]. A Meta-analysis showed that five-element music therapy has a significant effect on patients

with depression. At the same time, five-element music can effectively improve sleep [8]. Chen Hong et al found that the SAS and SDS scores of patients with severe pneumonia in the ICU ward were significantly lower than those of the general nursing group [9]. Some scholars have combined Five Elements music with other therapies to open up some new treatment methods. For example, Yin Lishi and others combined Wuxing music with Baduanjin [10]. Li Pei et al. used silence combined with pentatonic therapy [11].

3. RESEARCH OBJECTS AND METHODS

3.1 Research objects

This study selected the Affiliated Hospital of Jiangxi University of Traditional Chinese Medicine, the Second Affiliated Hospital of Nanchang University, Jiangxi Cancer Hospital, Jiangxi Chest Hospital, Nanchang Hongdu Hospital of Traditional Chinese Medicine and Nanchang Hospital from July 2021 to December 2021 that met the inclusion criteria. 322 oncology nurses from the First Affiliated Hospital of the University, Jiangxi Provincial Chest Hospital, and Jiangxi Provincial People's Hospital were selected as the research participants.

3.1.1 Inclusion criteria

(1) Nurses who volunteered to participate in this study; (2) Nurses who have obtained a practicing license and are on-the-job; (3) Nurses who have worked for ≥ 1 year.

3.1.2 Exclusion criteria

(1) Unwilling to participate in this study; (2) Nurses who took leave and were not on duty during the study period; (3) Nurses who experienced stressful events such as serious illnesses and the death of relatives within the past six months.

3.2 Research methods

3.2.1 Research tools

3.2.1.1 Questionnaire scale

This study used self-made general information questionnaires, including age, gender, marital status, education, professional title, etc., Zung's Self-rating Anxiety Scale (SAS), Self-rating Depression Scale (SDS), L.R. The Chinese version of the Symptom Self-Rating Scale (Scl-90) prepared by Derogatis et al. and the Positive and Negative Emotion Scale (PANAS) prepared by Watson et al.

3.2.1.2 Experimental materials

The principle of music selection refers to the "Basic Theory of Traditional Chinese Medicine" and selects music according to the principle of five sounds returning to five elements and entering five internal organs. The music excerpts of the Five Elements Music include "Jiangnan Hao", "Pingsha Falling Geese", "Gusu Xing", "Guangming Xing" and other representative pieces. Before the intervention of the two groups, the use of relaxation instructions helped the experimental group and the control group to better enter the state.

3.2.2 Research Process

(1) In this study, 322 nurses in the oncology department were selected by random sampling, and 322 questionnaires were distributed. After excluding invalid questionnaires, 308 valid questionnaires were obtained. Excel was used to input the survey data, and after importing into SPSS 21.0, the data was converted for the reverse scoring items. After processing, the survey data were subjected to descriptive statistical analysis, normal distribution test, t test, etc.

(2) Under the premise of controlling demographic variables, 21 nurses were selected from the 308 participants to enter the experimental group and 20 nurses to the control group. The experimental group was given five-element music listening intervention, while the control group was not given any intervention. Before the intervention, the tester introduced the scientific nature, superiority and equipment use of the intervention method to the nurses; the listening time was selected in the afternoon, and attention was paid to keep the environment quiet and air circulation, and at the same time, the participants were instructed to take a comfortable position. Relax the whole body, control the volume at 40-60 decibels, listen to music for 30 minutes at a time, 3 times a week, for a total of one month of intervention. After the intervention, the nurses in the experimental group and the control group were tested again to obtain their anxiety, depression, SCL-90 and positive and negative emotional scores.

4. RESEARCH RESULTS

4.1 Negative emotion score of oncology nurses

The results showed that the anxiety and depression of the nurses in the oncology department were relatively high. The average SAS and SDS scores reached 43.2 and 52.17 respectively, which were close to mild anxiety and had reached the level of mild depression. Judging from the SCL-90 score, the average score of each dimension item and the total average score of the nurses in the oncology department were higher than the norm, and the maximum value of the total score even reached 406 points. From the score of the Positive and Negative

Emotion Scale (PANAS), the positive emotion score of oncology nurses is higher than that of negative emotion, but the average score of negative emotion also reaches 22.78, indicating that nurses have a certain degree of positivity in their daily nursing work. Emotions, but they are also prone to negative emotions caused by busy work and nursing, which affect their own mental health. To sum up, the degree of negative emotions of nurses in the oncology department is relatively serious, and the level of mental health is significantly lower than that of the general population, which requires hospital managers to pay attention.

Item type	X̄ (dimension)	X̄ (Items)	Norm (n=1388)	Min	Max
SAS	43.2±14.95	2.18±0.51	/	25	84
SDS	52.17±21.68	2.63±0.48	/	25	85
SCL-90	146.8±15.55	1.64±0.63	129.90±38.76	90	406
Somatization	19.46±9.49	1.63±0.66	1.37±0.47	12	57
Obsessive-compulsive symptoms	18.68±9.88	1.88±0.70	1.62±0.58	10	46
Interpersonal sensitivity	14.95±10.32	1.67±0.69	1.65±0.51	9	45
Depression	21.68±14.85	1.68±0.71	1.50±0.59	13	63
Anxiety	15.55±11.76	1.56±0.67	1.39±0.43	10	46
Hostility	9.49±27.30	1.59±0.68	1.47±0.53	6	28
phobia	9.88±22.78	1.42±0.62	1.27±0.41	7	30
Paranoid	10.32±3.89	1.74±0.67	1.43±0.57	6	26
psychotic	14.85±6.04	1.5±0.63	1.29±0.42	10	40
Other	11.76±4.58	1.69±0.68	/	7	30
Positive emotions	27.3±5.41	2.73±0.64	/	10	48
Negative emotions	22.78±6.79	2.28±0.68	/	10	46

Figure 1 Scores on various scales of nurses in the oncology department

4.2 Scores of nurses in oncology department before and after intervention

It can be seen from the table that the SAS, SDS and SCL-90 scores of the experimental group after intervention were significantly decreased, and the difference was statistically significant (P<0.05). Although the negative emotion score did not reach significance (P>0.05), the average score also showed a downward trend. In the control group, except for SCL-90, there was no significant difference in the scores of each scale before and after the intervention. The significant difference in SCL-90 was due to the greater pressure on nurses during the rebound of the epidemic, which caused stronger negative emotions caused. In conclusion, the five-element music has a good regulating effect on the negative emotions of oncology nurses.

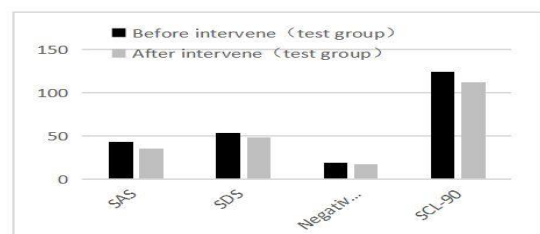


Figure 2 Comparison of the scores of the four scales before and after the nurse intervention in the two groups

Type	Num.		SAS (x±s)	SDS (x±s)	Negative emotions	SCL-90
Control group	20	Before intervention	42.64±3.30	47.07±3.44	20.73±1.88	132.55±12.19
		After intervention	41.84±1.73	54.09±1.36	23.36±2.14	139.64±13.15
	t	0.367	-1.992	-2.093	-3.070	
	p	0.721	0.074	0.063	0.012	
	Test group	21	Before intervention	43.03±1.93	53.63±1.60	19.10±1.18
After intervention	35.65±2.21		48.70±1.04	17.80±1.33	112.40±5.61	
t	4.955	2.917	1.073	3.796		
p	0.001	0.017	0.311	0.004		
t ₁	0.099	1.724	-0.715	-0.564		
p ₁	0.922	0.107	0.483	0.581		
t ₂	-2.225	-3.097	-2.154	-1.905		
p ₂	0.038	0.006	0.044	0.078		

Figure 3 Comparison of the scores of the four scales before and after the nurse intervention in the two groups

5. CONCLUSION

To sum up, the negative emotional state of nurses in the oncology department is worrying and deserves extensive attention from all walks of life. The particularity of the work of the oncology department has brought great challenges to the nursing work and aggravated the negative emotions of nurses. What's more, the high negative emotions of nurses will aggravate their tendency to leave, resulting in a shortage of medical talents, which will further increase the pressure of nursing work, forming a vicious circle. As a new treatment method, five-element music has less requirements on time and space and higher practicability. It has a significant intervention effect on the negative emotions of oncology nurses and improves their mental health. The application of five-element music to nurses is a concrete manifestation of the implementation of the "Healthy China 2030" strategy, the practice and exploration of the theory of traditional Chinese medicine, and the implementation of General Secretary Xi Jinping's proposal to "further develop traditional Chinese medicine". This has theoretical value and practical significance. The following research can expand the scope of the participants. The actual situation varies from place to place. Nurses from many places can be included in the subject group for research. It can also be used in conjunction with other Western therapies. In addition, the influence mechanism of five-element music on individuals is also a direction worthy of research.

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