



EFFECTIVENESS OF "MUSIC THERAPY" ON "FEELING OF WELLBEING" AMONG PATIENT UNDERGOING HEMODIALYSIS IN TERTIARY CARE HOSPITAL, KARAD

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ABSTRACT This research aimed to determine the effect of music therapy on feeling of well being of patients undergoing hemodialysis. Kidney failure disrupts physical and emotional well-being and results in range of negative emotions. Music therapy is an effective form of supportive cancer care for patients during the treatment process to improve physical and emotional well-being. An evaluative research approach, and quasi-experiment design was used for the study. The sample consists 30 patients each in control and experimental group. The data was collected by structured questionnaire. Experiment group received music therapy along with hemodialysis for once at the time for 1 hour. RESULT shows for pretest in control group mean 45.66 and experiment group mean 46.63, Mean difference was 0.97, t value is 0.27 and p value is 0.79 this indicate that it is not significant. The posttest reveals in control group mean 42.93 and experiment group mean 53.50, Mean difference is 10.57, t value is 3.93 and p value is 0.0002 this indicate that it is highly significant so music therapy is supportive treatment to promote wellness, improve physical and emotional well-being and the quality of life.

KEYWORDS : Music therapy, hemodialysis patients, Feeling of well being

1. INTRODUCTION

Kidney is an important organ of our body. The primary function of the kidney is to regulate the volume and composition of extra cellular fluid (ECF) and excrete waste products. It helps in maintaining the body in a healthy state. End stage renal disease (ESRD) is a slow progressive, irreversible destruction of functional unit of kidney caused by inherited disorder, prolonged medical condition such as diabetic mellitus and hypertension or long term use of certain medication.¹

Chronic kidney disease (CKD) and end stage renal disease (ESRD) are emerging public health problems in developing countries. A survey was conducted to estimate the ESRD incidence among 572029 subjects residing in 36 wards of the Bhopal city. The average crude and age-adjusted incidence rates were 151 and 232 per million populations respectively. The mean age was 47 years and 58% of them were males. They also found that the commonest cause of ESRD was Diabetic nephropathy (44%).²

Kidney transplantation and hemodialysis are the only choices of treatment for ESRD and CKD patients. Transplantation is a good choice as it can relieve the patient's entire problem with ESRD, but it is not possible for every patient due to the shortage of suitable donors, increased incidence of organ transplant rejection, age and ill health of many ESRD patients. Hence, most of the patient prefer and have to depend on hemodialysis for survival.¹

Hemodialysis is the procedure to remove waste and excess fluid from the blood when the kidney cannot do so sufficiently through the process of diffusion, osmosis and ultrafiltration using external dialyser¹. Studies have revealed that, about one million people are undergoing hemodialysis world wide³. In hemodialysis patient there may be a chance for developing complications. Complications are divided in to acute complication and chronic complications.

Acute complications occur during routine hemodialysis treatment. They include hypotension, back pain, itching, chills and fever. Some research studies found that, the treatments for these complications are more effective when they are treated with a combination of pharmacological treatment and an alternative/complimentary therapy. Among these therapies, the most commonly used therapies are music therapy, aroma therapy, imagery therapy and massage. Among which music therapy has a predominant effect on hemodialysis patients.⁴

Music is universal and connects across language barriers. Most people can respond to music in some way regardless of illness or disability. Music has an inherent ability to generate an emotional response in the listener. It stimulates a relaxation response which can therefore lead to physiological changes in the body. Music is known to reduce stress thereby producing related benefits such as lower blood pressure, improved respiration, reduced heart rate, better cardiac performance and reduced tension in muscles.⁵

Music therapy uses music to promote positive changes in the wellbeing of an individual. These positive changes may be manifested as changes in physical development, social and interpersonal development, emotional or spiritual wellbeing or cognitive abilities.⁵

Some research studies have proved that, music have the effect to elevate the level of melatonin, epinephrine and norephiniphine in the alzheimers patient. These are the chemicals which act on the brain to control mood, depression and sleep. The benefits of the therapy were still evident even six week after cessation of the therapy and in case of the melatonin the effect persist even longer.⁵

Music therapy is gaining wider acceptance in the general medical community and has certainly stood the test of time. Music therapists are now found practicing in a variety of institutions dealing with mental health, developmental and early intervention programs, correctional institutions and special education programs. Many are having success where traditional treatment methods have failed⁴. Nursing profession in the present era can imbibe the technique and improve patient comfort in varied settings where procedures are prolonged and frequent.

2. Review Of Literature

A prospective study involving 48 centres distributed all over India was conducted for the period of 1-3 months. Data comprised of prospective investigation conducted on 4145 CKD patients in various health centres. The results revealed the etiological patterns as follows; diabetes (29.7%), chronic glomerulonephritis (19.3%), hypertension (14%), chronic interstitial disease and vesico-ureteral reflux (12.6%), obstruction and calculus (9.3%), ADPKD and Alport Syndrome (8.4%), undiagnosed (6.2%). Based on the result of the study the prevalence of CRF in India is 0.8%. Diabetes had emerged as most frequent (30-40%) cause followed by hypertension (14-22%)⁶.

A population screening study was conducted in Delhi, India to determine the prevalence of chronic renal failure among adults. The researcher used a multi-stage cluster sampling method in the south zone of Delhi. The data was collected through questionnaires, physical examination, urine test for albumin, sugar and blood test for serum creatinine. The researcher selected a sample of 4712 people with mean age of 32 years and 56.16% were males. Among them, 37 were found to have CRF. Thus, the researcher concluded that, the prevalence of CRF in that population was 0.78% or in other words, if it is estimated for total Indian population, it is around 7.85 million people.⁷

An experimental study was conducted to determine the effects of music therapy on anxiety and depression in patients undergoing hemodialysis. A non equivalent control group pre test –post test design was used. They selected 36 samples (experimental group-18; control group-18) who received hemodialysis in three different hospitals. The data was collected through music preference questionnaire (MPQ), anxiety measurement, and depression measurement. The results revealed that the experimental group had less anxiety scores than the control group (F=8.05, p=0.008) and the experimental group had less depression than the control group (F=11.86, p=0.002). It was concluded that, music therapy may be applied as a method of nursing intervention contributing to the improvement of quality of life by reducing the anxiety and depression of patients undergoing hemodialysis.⁸

A study was conducted to evaluate the effects of music therapy on stress, anxiety, depression, immune function and vital signs among patient undergoing hemodialysis. A quasi experimental pre test post test non equivalent control group design was used with a sample of 47 patients. The experimental group received music therapy for four weeks i.e. 3 hours per each session, three times a week. The results revealed that, music therapy decreased stress, anxiety and depression; increased the number of B lymphocytes and decreased diastolic pressure significantly among experimental group compared to control group.⁹

An experimental study determined the influence of musical rhythms on the perception of subjective states of mind of adult patients on hemodialysis. The researcher selected 43 patients who were undergoing hemodialysis. The patients were divided in to four groups. The first group received music therapy on Monday and Wednesday morning, second group on Monday and Wednesday afternoon, third group on Tuesday and Thursday morning and the fourth group on Tuesday and Thursday afternoon for two weeks and researcher used march and waltz music styles. The subject's states of mind were evaluated immediately, before and after the intervention. The results revealed that 80% of the patients felt that time went by faster after the intervention in both rhythms. Hence, it was concluded that, music therapy was widely accepted by patients irrespective of the specific rhythms.¹⁰

Methodology

This research held at tertiary care hospital Karad, academic year 2017/2018, with time of research one month. Experimental research method was used in this research. Formal written permission will be obtain from the concerned authority of the hospital and hemodialysis unit. The sample consists of 60 patients and will be selected on the basis of sampling criteria of convenient purposive sampling technique. The subject will be assigned to experimental group (30) and control group (30). Sample will be selected as per inclusion criteria of the study. Procedure will be explained and consent will be taken from all samples. The pre-test of feeling of well being will be assessed in both the experimental and control groups. The intervention (i.e. music therapy) will then be administered to the experimental group by the investigator for 1hour and only for one time. Then the post-test of feeling of well being will be assessed after the intervention to the experimental group as well as control group.

3.Results:

Majority of patients 11 (36.66%) belongs to experimental group were within the age group of 55 – 69 years. whereas, 14 (46.67%) of patients from control group were within the age group of 39-54yrs 55–69 yrs.

Both genders are equally distributed to experimental group i.e. 15 (50%) whereas, 17 (56.66%) of patients from control group were also female.

Majority of patients 27 (90%) belongs to experimental group were belongs to Hindu religion, whereas, 26 (86.66%) of patients from control group were belongs to control.

Majority of patients 15 (50%) belongs to experimental group had secondary education whereas, 13 (43.33%) of patients from control group had secondary education.

Majority of patients 19 (63.34%) belongs to experimental group were had not working occupational status, whereas 18 (60%) patients had not working occupational status in control group.

Majority of patients 17 (56.67%) from experimental group having monthly income below 5000 and in control group 19 (63.34%) having monthly income below 5000.

Majority of patients 28 (93.37%) belongs to experimental group were had married marital status, whereas 25 (86.67%) patients had married marital status in control group.

Majority of patients 21 (70%) belongs to experimental group were had residence in rural area, whereas 25 (83.33%) patients had residence in rural area in control group.

Table 1: Comparison of pretest and post test of feeling of well being of both control and experimental group.

	Control Group		Experimental Group		Mean Difference	Unpaired t test
	Mean	SD	Mean	SD		
Pretest	45.66	11.16	46.63	10.49	0.97	t=0.27,p=0.79 Not Significant
Posttest	42.93	10.86	53.50	9.92	10.57	t=3.93,p=0.0002 Highly Significant
Mean Difference	2.73	6.87				
Paired t test	t= 4.10, p=0.0003 Very Significant	t= 9.64, p=0.0001 Highly Significant				

Our study findings shows that The unpaired t test was used to test the not significant difference between pre test of control group and experimental group. The mean difference was (df=0.97)(t=0.27 , p=0.79). similarly the unpaired t test was used to test the significant difference between post test of control group and experimental group. The mean difference was (df=10.57) and (t=3.93, p=0.0002).

Paired t test was used to test the significant difference between pre test and post test of control group (df= 2.73) (t=4.10,p=0.0003). The mean of pre test of control group (45.66) which was higher than mean of post test of control group (42.93). That was indicated that the feeling of well being in post test of control group was decreased.

Paired t test was used to test the significant difference between pre test and post test of experimental group (df=6.87) (t=9.64,p=0.0001). The mean of post test of experimental group (53.50) which was higher than mean of pre test of experimental group(46.63). That was indicated that the feeling of well being in post test of experimental group was increased.

This means that the instrumental music was effective on feeling of well being among hemodialysis patients.

Conclusion:

The findings of the study showed that majority of the patients from control group having decreased feeling of well being after dialysis with receiving routine care. After intervention there is improvement in feeling of well being of patients in experimental group. So this indicate music therapy is effective to improve feeling of well being.

Future Scope:

Keeping in view the findings of the present study, the following future scope were made:
1. A similar study can be conducted with a view to develop and

- implement new techniques to prevent psychological complications.
2. A similar study can be replicated on other dialysis patients receiving other treatment modality.
 3. An exploratory survey can be done to find out the limitations faced by the patients in following feeling of well being.

References

1. Lewis Sharon Mantik, Heitkemper margaret, Mcchean Shannon Ruff Dirkesen. Medical surgical nursing assessment and management of clinical problems. 6th ed. St Louis(Missouri): Moseby; 2006. p. 1210-7, 1228-38.
2. GK Modi, V Jha. The incidence of end-stage renal disease in India a population-based study ESRD incidence in India. *Kidney International Journal* 2006; 70(2): 2131-3. <http://www.nature.com/kj/journal/v70/n12/full/5001958a.html>.
3. Suresh Chandra, Sanjay Agarwal. Incidence of chronic kidney disease in India. *Oxford Journal Medicine Nephrology Dialysis Transplantation* 2006; 21(1): 232-3. <http://ndt.oxfordjournals.org/content/21/1/232.full>.
4. Angella Bascom, Mark a Breiner, Michael Briggs, Michael F Cantwell, Elizabeth A Chester, Jeanneane L Cline, et al. Professional guide to complementary and alternative therapies. 2nd ed. Pennsylvania: Spring house; 2002. p. 348-52.
5. Juanita Janie Martinez. Is music therapy?. *Nephrology Nursing Journal*; May-June 2009; 54-9.
6. Suresh Chandra, Sanjay Agarwal. Incidence of chronic kidney disease in India. *Oxford Journal Medicine Nephrology Dialysis Transplantation* 2006; 21(1): 2323. <http://ndt.oxfordjournals.org/content/21/1/232.full>.
7. Sanjay Kumar Agarwal, Suresh Chand Dash, Mohammed Irshad, Sreebhuaasn Raju, Ravinder Sing, Ravinder Mohan Pandey. Prevalance of chronic renal failure in adults in Delhi, India *Oxford Journal Medicine Nephrology Dialysis Transplantation* 2008; 20(8): 1638-42. <http://ndt.oxfordjournals.org/content/20/8/1638.full>.
8. http://findarticles.com/p/articles/mi_moicf/is_3_36/ai_n32/45158/
9. Kim KB, Lee MH, Sok SR. The effect of music therapy on anxiety and depression in patients undergoing hemodialysis. *Taehan Kanho Hakhoe Chi* 2006; 36(2): 3213. http://stti.confex.com/stti/inrc15/techprogramme/paper_18/23.htm.
10. Leandro Bechert Caminha, Maria Julia Paes da Silva, Eliseth Ribeiro Leao. The influence of musical rhythms on the perception of subjective states of adult patient on dialysis. *USP* 2009; 43(4)