

Effectiveness of Music Therapy on Depression among Hemodialysis Clients

J. Kavitha

Research scholar

I. Introduction

End-Stage renal disease (ESRD) is a chronic, progressive disorder characterized by irreversible and gradual loss of renal function. These patients have to resort to lifelong Renal Replacement Therapies such as hemodialysis, peritoneal dialysis and kidney transplantation. In India among one million populations an estimated incidence of ESRD is approximately 1, 00,000 each year, and in this 90% will be initiated on RRT.

In ESRD patients, psychosocial changes are on the rise which seems to be the immediate concern for the nurse. They will be experiencing many stressors such as fatigue, fluid restriction and food restriction. Those who are not able to cope with these stressors will be depressed and socially isolated.

Hemodialysis is a medical procedure that uses a special machine to filter waste products from the blood and to restore the normal constituents to it. For hemodialysis to be carried out, a large blood vessels with a fast blood flow needs to be accessed. It is well understood that kidney failure and further therapy like Hemodialysis can be challenging both physically and emotionally. These emotional and physical challenges can be the basis for successful adjustment that includes 2 key elements: optimal clinical care and the residual ability to perform. In essence, a hemodialysis patient can live long enough a high quality of life and live independently and productively, if they are able to function well mentally and physically. According to American music therapy association (AMTA) music therapy is an effective and valid treatment for persons who have psychosocial, affective, cognitive and communicative needs. It is a form of sensory stimulation which increases the relaxation.

Need for the Study

WHO (2009) conducted a worldwide study among selected countries to identify the existence of Depression with major disease conditions existing worldwide. The survey findings revealed that depression associated with ESRD and dialysis stood second with a prevalence rate of 16.25 surpassing depression associated with respiratory disease and metabolic disorders.

According to national Institute of Mental Health, nearly 10% patients suffering the depression due to the End Stage Renal Disease. In worldwide 34% patients were suffering from depression among the clients who are on hemodialysis (British Journal of Clinical Psychology). Joseph (2010) conducted a study to identify the presence of significant depressive symptoms common in patients with end-stage renal disease. The results revealed that 20–30% of end stage renal disease patients have significant depressive symptoms. Furthermore, it also highlighted experimentation of cognitive behavioral therapies and alternative therapies like music that has promising effects on reducing depression. Though depression is a major problem, its solution is very handy by alternative therapies. Many alternative therapies have been reduced level of depression who is on hemodialysis. One among is Music therapy. Here the researcher used music therapy to reduce depression among hemodialysis patients.

Statement of the Problem: A study to assess the effectiveness of Music therapy on Depression among Hemodialysis clients at Selected Hospitals of Coimbatore district.

Objectives

- To assess the level of depression among clients on hemodialysis.
- To evaluate the effectiveness of Music Therapy on level of depression among clients on hemodialysis.
- To determine the association between the level of depression among clients on hemodialysis with their demographic variables.

Hypotheses

H1: There is a significant difference between mean, pre and post test score on the level of depression among clients on hemodialysis.

H2: There is a significant association between level of depression among clients on hemodialysis and their demographic variables.

Operational Definitions

Effectiveness - It refers to the outcome of Music Therapy in terms of reducing depression among the clients on hemodialysis.

Music Therapy - In this study music refers to the administration of rhythmic and melodious tune recorded on a CD intended to remove distress and the mind will wake up to a sense of relaxation, music therapy given for 20 minutes per day for 5 days.

Depression- It refers to a worried state of mood in which clients on hemodialysis feel sad, helpless, hopeless, and worthless as measured by modified Beck's depression scale.

Hemodialysis clients: Clients who are admitted for Hemodialysis.

Assumptions

- Music Therapy may reduce depression
- Music Therapy has no side effects on clients on hemodialysis who experience depression
- Music Therapy may help to improve the emotional health and well being among clients on hemodialysis.

Delimitations

- The study was delimited to clients on hemodialysis.
- The study was delimited to a period of 6 weeks

II. Methodology

Research Approach: evaluative approach

Research design : A pre experimental one group pretest posttest design

Variables :

Dependent variable : Depression
Independent variable : Music Therapy

Setting of the Study : selected private hospitals of Coimbatore district.

Population : for this study, target population is clients on hemodialysis with depression. The accessible population includes clients on hemodialysis with depression in selected hospitals.

Sample : In other words it is the process of obtaining information about the entire population by examining only a part of it. Clients admitted for hemodialysis in selected hospitals, during data collection period. The sample size was 30.

Sampling Technique: non probability convenience sampling was used to select sample.

Criteria for sample selection

Inclusion Criteria

- Clients who were admitted with renal failure and on dialysis.
- Clients who had symptoms of sadness, loss of interest, changes of sleeping pattern, worthlessness.
- Clients between the age group of 20- 80 years.
- Irrespective of sex.
- Clients who can read either English or Tamil.

Exclusion criteria

- Clients with sensory deficit
- Clients who were on antidepressants

Description of the Tool

Modified "Beck's Depression inventory scale" was used to assess the level of depression. The tool consisted two parts.

Part: I: It consisted of demographic variables of clients on hemodialysis.(Age, Gender, Marital status, Type of Family, Education, Occupation, Income, Frequency of dialysis, Sleeping pattern, Duration of illness, Duration of dialysis, Type of vascular access,)

Part: II: It consisted of Modified Beck's depression inventory to assess the level of depression. The modified Beck's depression inventory consisted of 21 items to assess the level of depression.

Intervention (Music Therapy):

Music Therapy can alter brain patterns and offer therapeutic help for patients suffering depression who is on hemodialysis. There are a number of clinical research studies showing the benefits of this therapy. It refers to target oriented use of certain music ragas such as SindhuBhairavi, Kalayani raga, to restore maintain and improve emotional health and well being among clients on hemodialysis. In this study music refers to the administration of rhythmic and melodious tune recorded on a CD intended to remove distress and the mind will wake up to a sense of relaxation, music therapy given for 20 minutes per day for 5 days. Before administering Music Therapy the investigator got the consent form from the subjects and informed regarding Music Therapy and its benefits on depression .

Validity: Five experts in Nursing and two experts in Medicine evaluated the content validity of the instruments. Nursing experts were from medical surgical nursing and medical experts were from medical and nephrology department.

Reliability: Reliability was established through cron bach's alpha method.

Data Collection Procedure: The data collection procedure was done for 6 weeks Permission to conduct the study was obtained from the Administrative Director of each hospital, Head of the department and unit in-charge of nephrology ward. 30 sample on hemodialysis were selected for the study by using non probability purposive sampling technique. The subjects were informed by the nature and purpose of the study. pre-test was conducted by using beck's depression scale. On second day Music Therapy was given to subjects for about 20 minutes once a day for 5 consecutive days. After that on the 5th day posttest was done by using the Beck's depression scale.

III. Findings And Discussion

The response were analyzed by using descriptive statistics (Mean, Standard Deviation, Frequency and Percentage) and inferential statistics (Paired "t" test and Chi Square). Discussion on the findings was arranged based on the objectives of the study.

Major findings of the study are

- With respect to the demographic variables 40% of the clients were in the age group of 41-60 years, and 60-80 years, 50% of them were males and females, 63% of them were married, 77% of them were hailing from nuclear family, 40% of them had studied up to secondary education, 40% of them were private employees, 50% of them earned an income between Rs3000/-5000/, 67% of clients undergoing hemodialysis were twice in week, 53% of them slept between 3-6 hours/day, 73% of clients undergoing hemodialysis 3-6 years of duration of illness, 60% of clients undergoing hemodialysis 2-3 hours of duration of dialysis, 80% of them had AV fistula, 76% of them were not practicing other complementary therapies.
- With regard to effectiveness of Music Therapy on level of depression among clients undergoing hemodialysis, the mean post test score of depression was less than mean pre test score. The Obtained "t" value 12.72 was significant at $P < 0.001$ level.
- With regard to the association between the levels of depression with their selected demographic variables, the study finding revealed a significant association between the levels of depression with education and type of vascular access.

The first objective of the study was to assess the level of depression among clients on Hemodialysis. Among this group, in the pretest 9(30%) clients had mild level of depression, 12(40%) had borderline level of depression and 9(30%) had moderate level of depression. The study finding was supported by the findings of the study done by Klanc et al, (2009) assessed the prevalence of depression among hemodialysis patients in an University hospital at Mostar. Data collection using the Beck's depression scale recorded higher prevalence of depression of 51.8%. Thus the researchers concluded that the clients on hemodialysis had a significantly moderate level of depression in comparison with general population. The second objective was to evaluate the effectiveness of Music therapy in terms of depression among clients on hemodialysis. The study revealed that pretest mean depression score was 18.8, standard deviation 3.43. In the post test mean depression score was 11.2, standard deviation 2.03 and mean difference was 7.6, t value was 12.72. It was significant at $P < 0.001$ level. The findings of the study was supported by Moradipinnah et al (2009) conducted a case-control study to examine the effect of ragas (Mohana, Kalyani and Sindhubhairavi) on the level of depression experienced by patients on

hemodialysis, as measured by the 21-item Depression Scale. Differences in pre- and post-intervention scores demonstrated that there were significant decreases in mean scores of depression ($P = 0.02$) in the intervention group, who listened to 20 minutes of relaxing music, as compared with the control group who had 20 minutes of simple bed rest. Hence the stated hypothesis H1 (There is a significant difference between pre and post test score on the level of depression among clients on hemodialysis) was accepted. It revealed that Music Therapy was effective in terms of depression among clients on hemodialysis was effective.

The third objective was to determine the association between the level of depression among clients on hemodialysis with their demographic variables. The study revealed that in pretest there was a significant association between education (13.28*), type of vascular access (11.23*) with the level of depression among clients on hemodialysis. In the posttest there was no significant association between level of depression among clients on hemodialysis and demographic variables.

IV. Summary And Conclusion

Conclusion: The main conclusion drawn from this present study was that majority of the clients undergoing hemodialysis had mild borderline and moderate level of depression. After administration of Music Therapy the sample became familiar and found them comfortable and expressed satisfaction.

Implications of the Study

Nursing Practice

- The study findings clearly point out that the administration of Music therapy was effective in reducing the level of depression among clients undergoing hemodialysis. Nurses can be inserted on the use of Music Therapy as non threatening medium of relaxation therapy and it is easy to administer and inexpensive one
- It helps to encourage the use of music therapy as a form of mind and body relaxation technique and it has no adverse effects on clients undergoing hemodialysis.
- The study finding helps the nurse to know the importance of Music Therapy in reducing the level of depression and helps to motivate the clients with depression undergoing hemodialysis.

Nursing Administration

- Nurse administrator can plan for in service education programs on the use of complementary therapy in reduction of major symptoms among chronic illness
- Nurse or Administrator should motivate the nursing personnel to apply the mind and body relaxation into practice.

Nursing Research

- The study findings can be added to the research review regarding the effectiveness of Music Therapy on reducing depression.
- The study finding can be set as the baseline data to carry out worth.
- As evidence from the review of literature more research needs to be conducted on the effectiveness of Music Therapy along with other routine practice.

V. Recommendations

- A similar study can be conducted indifferent settings such as hospital, community and rehabilitation centre.
- A similar study can be conducted among large sample size.
- Effectiveness of this Music Therapy can be compared with other complementary therapies.
- A similar study can be done to see the effect of music therapy in other chronic illness.

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