

A Study to Assess the Effectiveness of Music Therapy On Anxiety Among Patients Undergoing Cardiac Catheterization in GKNM Hospital, Coimbatore

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Abstract- To determine the effectiveness of music therapy on patients experiencing anxiety during cardiac catheterization at the GKNM Hospital in Coimbatore, a pre-experimental study was carried out. The study's major goal was to compare patients' anxiety levels and the impact of music therapy. A quasi-pre-experimental one group pretest-posttest design was adopted for this study. This study was conducted in the pre cath room (ward 8) of the G. Kuppuswamy Naidu Memorial Hospital in Coimbatore. This study used a practical sampling technique on 60 participants chosen as samples. Patients who were admitted for cardiac catheterization had their data gathered. To evaluate the demography, structured interview questionnaires were used. The levels of anxiety and its accompanying signs and symptoms were evaluated using the modified Hamilton Anxiety Rating Scale. Also evaluated were crucial parameters. Soon after the patient was admitted for a heart catheterization, a pretest was performed. The patient had music therapy for 30 minutes, and then the pretest was administered. After the intervention period of two hours, a posttest was taken. Both descriptive and inferential statistics were used to examine the results. The combined SD was 5.81 and the 't' value was 22.30, with the mean difference in anxiety levels being 17.39. A paired 't' test revealed a significant difference between the pretest and posttest anxiety levels at the 0.05 level. The table value (1.96) was lower than the computed blood pressure 't' value (7.35). The table value (2) is lower than the computed heart rate 't' value (9.09). According to the study's conclusions, participants having cardiac catheterization showed a substantial difference in vital parameter levels between the pretest and posttest. There was a connection between marital status and anxiety levels. The study came to the conclusion that music therapy is an excellent, affordable, and safe method for lowering anxiety and important parameters.

Index Terms- Music therapy, Anxiety, Cardiac catheterization.

I. INTRODUCTION

The heart is revered as the seat of the soul, the source of courage, the repository of love and affection, and the dwelling place of the soul. All of these are close to literary expressions and reflect physiologic reality. In actuality, the heart acts as a continuous pump to maintain the flow of blood that keeps all of the body's cells alive. Cardiovascular disease causes mortality, and the absence of a heartbeat signifies this (Tortora G. J., 1996). With the growing popularity of complementary therapies in healthcare, it is possible that the usage of music therapy has expanded as well. Patients of all ages, including infants, children, adults, and seniors, have benefited from music therapy (Denncy, 1997).

II. NEED FOR THE STUDY

Many people experience anxiety while in the hospital. When patients are eagerly awaiting their time for a heart catheterization, it rises. Through the relaxation response, music therapy lessens the psychophysiological effects of stress and anxiety. These patients who were waiting for cardiac catheterization participated in a study. State anxiety levels were measured both before and after music therapy session. The waiting period right before the surgery was shown to have the highest anxiety levels, and the recovery period had the lowest levels (Chan., & Cheung, 2003). Growing in popularity as a successful holistic treatment, sound healing has plenty of support. The human body has seven glandular systems, the spectrum contains seven colors, and the musical scale contains seven notes. When the body is subjected to pure vibration, the brain endocrine immune systems are strengthened and purified. Every hue and note has a distinct vibration that activates the energy centers of the mind. 2009's Santhi Appavu. A study was done to determine how music affected anxiety. For this investigation, a true experimental design was used. The individuals in the experimental group received music therapy for 30 minutes. Researchers found that patients who had the option of listening to particular music prior to cardiac catheterization

experienced much lower levels of anxiety (Barnason, S., 2001). Therefore, the researcher was motivated to carry out the study to ascertain whether music might effectively reduce anxiety in patients undergoing cardiac catheterization.

III. METHODS

In this study, a quasi-pre-experimental one-group pretest-posttest design was chosen to evaluate the impact of music therapy on patients undergoing cardiac catheterization in terms of anxiety. All patients undergoing cardiac catheterization made up the study's population, and the pre-cath room (ward 8) of the G. Kuppaswamy Naidu Memorial Hospital in Coimbatore served as the study's location. As samples, 60 hospitalized patients who were having cardiac catheterizations were chosen. For the investigation, a convenient sampling strategy was used..

IV. MATERIALS

Patients who were admitted for cardiac catheterization were the subjects of weeks' worth of data collection in the pre-cath

room. After receiving the participants' informed consent, demographic information was gathered from them. The levels of anxiety were measured using the modified Hamilton Anxiety Rating scale. A standardized interview questionnaire was used to evaluate the relevant essential criteria. Soon after the patient was admitted for a heart catheterization, a pretest was performed. The patient had music therapy for 30 minutes, and then the pretest was administered. A posttest was done following a two-hour intervention.

V. DATA ANALYSIS

To analyze the data, descriptive and inferential statistics were applied. The distribution of frequencies and percentages was utilized to evaluate the demographic variable. The levels of anxiety and its accompanying signs and symptoms of patients during pre and post music treatment, as well as the vital parameters of patients during pre and post music therapy, were compared using a paired 't' test. Chi-square test was employed to evaluate the relationship between anxiety levels and demographic factors.

VI. RESULTS

Table 1: Distribution of pretest levels of anxiety among patients undergoing cardiac catheterization
 n=60

Levels of anxiety	Pretest		Mean	SD
	F	%		
Mild anxiety (08-18)	1	2	33.7	4.71
Moderate anxiety (19-29)	15	25		
Severe anxiety (30-40)	44	73		

Table 1 reveals that in pretest 1 patient (2%) had mild anxiety, 15 (25 %) of them had moderate anxiety and 44 (73%) of them had severe anxiety.

**Table 2: Distribution of pretest scores of signs and symptoms among patients undergoing cardiac catheterization
 n=60**

Scores of signs and symptoms	Pretest		Mean	SD
	f	%		
Mild (01-03)	4	6.6	5.63	1.55
Moderate (04-06)	40	66.7		
Severe (07-10)	16	26.7		

Table 2 shows that out of 60 samples 4 (6.6%) of them had mild scores of signs and symptoms, 40 (66.7%) of them had moderate scores of signs and symptoms and 16 (26.7%) of them had severe scores of signs and symptoms.

**Table 3: Distribution of posttest levels of anxiety among patients undergoing cardiac catheterization
 n=60**

Levels of anxiety	Posttest		Mean	SD
	f	%		
Mild anxiety (08-18)	50	84	16.31	2.50
Moderate anxiety (19-29)	08	13		
Severe anxiety (30-40)	02	03		

Table 3 shows that in posttest, 50 (84 %) of them had mild anxiety, 08 (13 %) of them had moderate anxiety, and 02(03%) of them had severe anxiety.

**Table 4: Comparison between mean pretest and posttest levels of anxiety among patients undergoing cardiac catheterization
 n=60**

Group	Mean of the differences	Combined SD	't' value	df	Table value
Pretest	17.39	5.81	22.30*	59	1.96

Posttest					
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df- Degrees of freedom *Level of significance- 0.05

Table 4 shows that there was a significant difference in pretest and posttest levels of anxiety.

TABLE 5: Comparison between mean pretest and posttest scores of signs and symptoms among patients undergoing cardiac catheterization

Group	Mean of the differences	Combined SD	't' value	df	Table value
Pretest	2.80	1.37	11.02*	59	1.96
Posttest					

df- Degrees of freedom *Level of significance- 0.05

Table 5 shows that there was a significant difference in pretest and posttest of scores of signs and symptoms.

TABLE 6: Comparison between mean pretest and posttest levels of vital parameters among patients undergoing cardiac catheterization

n=60

Vital parameters	Group	Mean	SD	Mean difference	Combined SD	't' value	df	Table value
Blood pressure	Pretest	97.90	11.91	4.78	5.04	7.35*	59	1.96
	Posttest	93.12	10.92					
Heart rate	Pretest	80.93	5.69	5.96	5.08	9.09*	59	2
	Posttest	74.97	4.04					
Respiratory rate	Pretest	20.77	2.71	2.74	2.85	7.42*	59	1.96
	Posttest	18.03	1.84					

df- Degrees of freedom

*Level of significance- 0.05

Table 6 shows that there was a significant difference in pretest and posttest levels of blood pressure, heart rate and respiratory rate among patients undergoing cardiac catheterization.

VII. DISCUSSION

An evaluation of the levels of anxiety among heart patients before to cardiac catheterization was done by Yossef Blaer in

2002. According to the study's findings, the patient was very anxious before being transferred to the cardiac catheterization lab. According to Aleksandr Dzyu's (2006) research, music therapy can significantly lower anxiety levels in patients having cardiac

catheterization. The results of the current study support the findings of the preceding studies, which highlight how music therapy significantly reduced anxiety levels in patients having cardiac catheterization.

VIII. CONCLUSION

The study came to the conclusion that music therapy was an excellent, affordable, and risk-free intervention for lowering anxiety and important parameters.

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