www.ThePharmaJournal.com

The Pharma Innovation

Avinash Salunkhe
Krishna Institute of Nursing
Sciences, Karad, Maharashtra,
India

Ujawala More
Krishna Institute of Medical
Sciences Deemed to Be
University, Karad, Maharashtra,
India

Effect of instrumental music on feeling of wellbeing among patient undergoing chemotherapy

Avinash Salunkhe and Ujawala More

Abstract
A cancer diagnosis is one of the most feared and serious life events that cause stress in individuals and families. Cancer disrupts social, physical and emotional well-being and results in a range of emotions, including anger, fear, sadness, guilt, embarrassment and shame. It may be also basic for planning effective programs of rehabilitation to promote wellness, improve physical and emotional well-being and the quality of life. Purpose of study was to assess the effectiveness music therapy on feeling of well being among experimental group.

Methods: Quasi-experimental research approach used in study, 60 samples selected 30 in control group and in experimental 30 samples selected according to convenient sampling technique in Chemotherapy ward of Krishna Hospital Karad. Structured checklist to collect demographic data used and modified Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) used to check well being of chemotherapy clients. The assessment of feeling of well being was done in both control group and experimental group. Consent was obtained from all subjects. Instrumental music was introduced to patient of experimental group and procedure was explained and they were asked to listen instrumental music, encouragement and support were given to these patient's by the investigator during intervention for 1 hrs. Every patients feeling of well being was assessed before and after administering instrumental music and in control group and every patient was assessed for feeling of well being.

Results: Majority of clients 11 (36.66%) belongs to experimental group were within the age group of 55 – 69 years. whereas, 14 (46.67%) of clients 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 clients from control group were also female. Majority of clients 27 (90%) belongs to experimental group were belongs to Hindu religion, whereas, 26 (86.66%) of clients from control group were belongs to control. Majority of clients 15 (50%) belongs to experimental group had secondary education whereas, 13 (43.33%) of patients from control group had secondary education. Majority of clients 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 5000Majority 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. 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 cancer patients.

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

Keywords: Instrumental music, feeling of well being, patients undergoing chemotherapy.

Introduction

Music therapy is one of the oldest forms of creative art therapy and has been shown to have effects in different clinical and therapeutic settings [1]. From that point, music therapy established itself as a recognized health profession in the clinical context. One century later, music therapy was introduced in the field of palliative care in 1978 by Munro and Mount, who used "receptive and recreative methods to promote relaxation and encourage the expression of

Correspondence:
Avinash Salunkhe
Krishna Institute of Nursing
Sciences, Karad, Maharashtra,
India

difficult feelings [2, 3]."

According to Wreaks (2008) complementary therapy are non invasive, inexpensive, useful in controlling symptoms and improving the quality of life. Rigorous scientific research has produced evidence that music therapy is effective and reduces the physical and emotional symptoms [4].

Material and method
Research approach: Evaluative research approach

Research design: Quasi-experimental research design
Setting: tertiary care Hospitals of Karad City Krishna Hospital, Karad, Maharashtra, India.

Study subjects: The sample selected for the study was patients undergoing chemotherapy at Tertiary Care Hospitals of Karad.

Sample Size: 60 samples (30 control group and 30 Experimental group)

Sampling Technique: samples were selected by convenient sampling technique

Data collection tool: The data analyzed were presented under the sections: **Section I:** Description of sample characteristics.

Section II: To assess the level of feeling of well being among control group of patients before and after undergoing chemotherapy.

Section III: To assess the level of feeling of well being among experimental group of patients before and after undergoing chemotherapy along with instrumental music.

Section IV: To determine the effectiveness of instrumental music on feeling of well being among experimental group of patients undergoing chemotherapy.

Section V: To find out the association between feeling of well being and selected socio demographical variables among experimental and control group of patients undergoing chemotherapy.

Table 1: Depicts the distribution of patients belongs to experimental and control group according to age, in terms of frequency and percentage.

N=60

Age in years	Control group		Experimental group	
	N	%	N	%
A. 23-38	1	3.33	7	23.34
B. 39-54	14	46.67	9	30
C. 55-69	14	46.67	11	36.66
D. 70-85	1	3.33	3	10
Total	30		30	

Majority of the patients 46.67% were within the age group of 49 – 54 yrs & 55 - 69, and 3.33% were within the age group of 23 – 38 & 70 - 85 yrs from control group. In experimental group 36.66% were between age group of 55 – 69 years and 10% patients within the age group of 70 – 85 years.

Table 2: Depicts the distribution of patients belongs to experimental and control group according to their gender, in terms of frequency and percentage.

N=60

Gender	Control Group		Experimental Group	
	Number	Percentage	Number	Percentage
A. Male	13	43.34	15	50
B. Female	17	56.66	15	50

Table 3: Depicts the distribution of patients belongs to experimental and control group according to their Religion, in terms of frequency and percentage.

N=60

Religion	Control Group		Experimental Group	
	Number	Percentage	Number	Percentage
A. Hindu	26	86.66	27	90
B. Muslim	2	6.67	1	3.33
C. Christian	0	0	0	0
D.Other	2	6.67	2	6.67

With regard to religion 86.66% patients were having Hindu religion and 0% patients from Christian religion in control group, experimental group 90% patients belongs to Hindu religion and 0% patient were Christian.

Table 4: Depicts the distribution of patients belongs to experimental and control group according to their Educational Qualification, in terms of frequency and percentage.

N=60

Educational qualification	Control		Experiment	
	Number	Percentage	Number	Percentage
A. No Formal Education	8	26.67	5	16.67
B. Primary	5	16.67	0	0
C. Secondary	13	43.33	15	50
D. Tertiary	1	3.33	7	23.33
E. Graduate	3	10	3	10
F. Post Graduate	0	0	0	0

With regard to Educational qualification 43.33% patients were having secondary educational qualification in control group and 50% in experimental group. No one from both control and experimental group were having educational qualification of post graduate.

Table 5: Depicts the distribution of patients belongs to experimental and control group according to their Occupation, in terms of frequency and percentage.

N=60

Occupation	Control		Experimental	
	Number	Percentage	Number	Percentage
A. Working	12	40	11	36.66
B. Not Working	18	60	19	63.34

Table 6: Depicts the distribution of patients belongs to experimental and control group according to their Monthly income, in terms of frequency and percentage.

N=60

Income	Control Group		Experimental Group	
	Frequency	Percentage	Frequency	Percentage
A. <Rs 5000	19	63.34	17	56.67
B.Rs 5001-10,000	9	30	9	30
C. Rs 10,001-15,000	1	3.33	3	10
D. >Rs 15000	1	3.33	1	3.33

With regard to the income in experimental and control group; 56.67% samples from experimental and 63.33% samples from control group were from below 5000 income. 3.33% (1) patients of experimental group and 3.33% (1) of patients belongs to control group were having income more than 15000.

Table 7: Depicts the distribution of patients belongs to experimental and control group according to the marital status, in terms of frequency and percentage.

N=60

Marital Status	Control Group		Experimental Group	
	Frequency	Percentage	Frequency	Percentage
A. Married	26	86.67	28	93.37
B. Unmarried	4	13.33	1	3.33
C. Divorced	0	0	1	3.33

With regards to marital status (26) 86.67% patient are married (4) 13.33% are unmarried and 0% are divorced in control group. were as (28) 93.37% are married and (1) 3.33% was unmarried and (1) 3.33% was divorced in experimental group.

Table 8: Depicts the distribution of patients belongs to experimental and control group according to the residence, in terms of frequency and percentage.

N=60

Residence	Control		Experimental	
	N	%	N	%
A. Urban	5	16.67	9	30
B. Rural	25	83.33	21	70

With regards to riddance in control group (25) 83.33% patient are from rural area and (5) 16.67% from urban area. Whereas (21) 70% patients from rural area and (9) 30% from urban area.

Section II: To assess the level of feeling of well being among control group of patients undergoing chemotherapy.

Table 9: Feeling of welling scores of control group.

N=60

Grades	Score	Control Group (Pre test)		Control Group (Post test)	
		Frequency	Percentage	Frequency	Percentage
Very low.	00-32 points	6	20	7	23.33
Below average.	33-40 points	3	10	4	13.33
Average.	41-59 points	18	60	16	53.34
Above average	60-70 points	3	10	3	10

With regards to pre test score in control group (18) 60% patient was having average feeling of well-being and (3) 10% patients was from below average feeling of well-being. Whereas in post test score of control group (16) 53.34% patients was having average feeling of well-being and (4) 13.33% patients was having below average feeling of well-being.

Pre test and post test mean scores in the control group.

Table 10: Pre test and post test mean scores in the control group.

N=60

Grades	Score	Control Group (Pre test)		Control Group (Post test)	
		Mean	SD	Mean	SD
Very low.	00-32 points	45.67	11.16	42.93	10.86
Below average.	32-40 points				
Average.	40-59 points				
Above average	59-70 points				

With regards to pre test mean score of pre test of control group was 45.67 and standard deviation was 11.16 whereas in control group post test mean score was 42.93 and standard deviation was 10.86.

Section III: To assess the effectiveness music therapy on feeling of well being among experimental group.

Table 11: Feeling of welling scores of experimental group.

N= 60

Grades	Score	Experimental Group (Pre Test)		Experiment Group (Post test)	
		Frequency	Percentage	Frequency	Percentage
Very low.	00-32 points	1	3.33	0	0
Below average.	32-40 points	9	30	3	10
Average.	40-59 points	14	46.67	18	60
Above average	59-70 points	6	20	9	30

With regards pre test score in experimental group (14) 46.67% patient was having average feeling of well-being and (1) 3.33% from pre test experimental group was having very low feeling of well-being. Whereas in post test score experimental group (18) 60% patients was having average feeling of well-being and (0) 0% patients was having very low feeling of well-being.

Pre test and post test mean and SD score of experimental group.

Table 12: Pre test and post test mean and SD scores in the experimental group.

N= 60

Grades	Score	Experiment Group (Pre test)		Experiment Group (Post test)	
		Mean	SD	Mean	SD
Very low.	00-32 points	46.63	10.49	53.50	9.92
Below average.	32-40 points				
Average.	40-59 points				
Above average	59-70 points				

With regards to pre test mean score in experimental group was 46.63 and standard deviation was 10.49 whereas in experimental group post interventional mean score was 53.50 and standard deviation was 9.92

Table 13: 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			

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 cancer patients.

Table 14: Association between feeling of well being and selected socio demographical variables control group

N=30 control group

S. No.	Variable		Very low	Below average	Average	Above average	P-value
			Level of felling of well-being				
1.	Age	A. 23-38	0	0	1		0.989002
		B. 39-54	3	1	8	2	
		C. 55-69	3	2	8	1	
		D. 70-85	0	0	1	0	
2.	Sex	A)Male	2	1	7	3	0.218218
		B)Female	4	2	11	0	
3.	Religion	A)Hindu	5	3	16	3	0.0084
		B)Muslim	0	0	2	0	
		C)Christian	0	0	0	0	
		D)Other	1	0	0	0	
4.	Educational Qualification	A)no formal education	3	2	4	0	0.0052
		B)Primary	1	0	3	0	
		C)secondary	1	0	10	1	
		D)high school	1	1	0	0	
		E)Graduate	0	0	1	2	
		F)Post Graduate	0	0	0	0	
5.	Occupation	A)Working	2	1	6	3	0.171797
		B)Not Working	4	2	12	0	
6.	Income of the family per month	A) <Rs 5000	2	2	14	1	0.04085
		B)Rs 5001-10,000	4	0	3	2	
		C) Rs 10,001-15,000	0	1	0	0	
		D) >Rs 15000	0	0	1	0	
7.	Marital Status	A) Married	3	4	16	3	0.0925
		B) Unmarried	1	1	2	0	
		C) Divorced	0	0	0	0	
8.	Residence	A) Urban	5	2	16	2	0.65939
		B) Rural	1	1	2	1	

There was significant association between socio demographic variable i.e. religion educational qualification & income in control group. Other Socio-demographic variables are not having association with feeling of well being.

Table 15: Association between feeling of well-being and socio-demographic variables experimental group:

N=30 experimental group

S. No.	Variable		Very low	Below average	Average	Above average	P-value
			Level of felling of well-being				
1.	Age	A)0-32	1	2	3	2	0.201598
		B)32-40	0	4	1	3	
		C)40-59	1	4	6	0	
		D)59-70	0	0	3	0	
2.	Sex	A)Male	0	3	8	4	0.399026
		B)Female	1	6	6	2	
3.	Religion	A)Hindu	1	9	12	6	<.0001
		B)Muslim	0	0	1	0	
		C)Christian	0	0	0	0	
		D)Other	0	0	1	0	
3.	Educational Qualification	A) No formal education	0	2	3	0	<.0001
		B)Primary	0	0	0	0	
		C)secondary	1	6	6	2	
		D)high school	0	1	4	2	
		E)Graduate	0	0	1	2	
		F)Post Graduate	0	0	0	0	
5.	Occupation	A)Working	0	5	4	2	0.496338
		B)Not Working	1	4	10	4	
6.	Income of the family per month	A) <Rs 5000	2	7	6	2	0.290617
		B)Rs 5001-10,000	0	1	6	2	
		C) Rs 10,001-15,000	0	0	2	1	
		D) >Rs 15000	0	0	0	1	
7.	Marital Status	A) Married	1	9	13	5	0.511535
		B) Unmarried	0	0	1	0	
		C) Divorced	0	0	0	1	
8.	Residence	A) Urban	1	1	4	3	0.170419
		B) Rural	0	8	10	3	

There is significant association between socio demographic variable i.e. educational qualification and religion.

Discussion: A study to evaluate the effectiveness of music therapy on pain and anxiety among cancer patients at Apollo hospital, Chennai. Results found that the pain score of the cancer patients was high before-M=8.31, SD=1.39, in comparison with the scores after the music therapy M=2.49, SD=0.90. The level of anxiety in cancer patients was high M=51.6, SD= 7.40. And after music therapy it was found to be less- M=55 (5SD=5.28). The difference was statistically proven to be significant ($p<0.001$) [5] in this study level of feeling of well being among of patients undergoing chemotherapy: regards to pre test score in control group (18) 60% patient was having average feeling of well-being and (3) 10% patients was from below average feeling of well-being. Whereas in post test score of control group (16) 53.34% patients was having average feeling of well-being and (4) 13.33% patients was having below average feeling of well-being. Effectiveness music therapy on feeling of well being among experimental group: With regards pre test score in experimental group (14) 46.67% patient was having average feeling of well-being and (1) 3.33% from pre test experimental group was having very low feeling of well-being. Whereas in post test score experimental group (18) 60% patients was having average feeling of well-being and (0) 0% patients was having very low feeling of well-being.

Conflicts of interest: There are no conflicts of interest.

References
1. Bailey T. Music as medicine: The history of music therapy since antiquity. Notes. [Google Scholar]. 2001; 57(3):603-604.
2. O'Kelly J, Koffman J. Multidisciplinary perspectives of music therapy in adult palliative care. Palliat Med. [PubMed] [Google Scholar]. 2002; 1:235-41.
3. Munro S, Mount B. Music therapy in palliative care. JAMA. [PMC free article] [PubMed] [Google Scholar]. 1978; 119:1029-295.
4. Wreaks. Benefits of the music therapy. Journal of complementary medicine. 2008; 19(4):223-226.
5. Vasanth Kalyani C. A study to evaluate the effectiveness of music therapy on pain and anxiety among cancer patients at Apollo hospital, Chennai. Health Action, 2007, 17-19.