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### **Quality of Life of Patients on Peritoneal Dialysis**

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#### **ABSTRACT**

Depression and stress are under diagnosed problems and an independent risk factor for increased morbidity and mortality in patients on peritoneal dialysis affecting the quality of life. The present study aims at decreasing the stress level and improves the quality of life through music therapy on patients undergoing peritoneal dialysis. Fifteen patients who were given nutrition therapy for three years were put on music therapy in the fourth year. Assessment of quality of life is studied at the beginning and end of fourth year using the quality of life scoring scale of Carol Burakhardt. In the overall assessment of the 7 point scale men and women scored almost the same, but the difference in improvement in men is 48.4 points as against in women 35.1. Overall improvement as seen by the number of patients scoring the highest score of 7 is in 9 aspects in women and only one among men. The indication is the women have accepted dialysis as routine and a challenge, seemed to be better equipped to handle the situation than men.

**KEY WORDS:** Peritoneal dialysis, Music therapy, Quality of life, Nutrition therapy.

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## **INTRODUCTION**

Music has been a constant part of our culture since the start of civilization. The purpose of music range from aesthete pleasure, religious or ceremonial purposes and as a product in society more recently the use of music as a form of therapy is becoming recognized in our communities. Studies have shown positive effects of music on measured physiological changes in hemodynamic, respiratory and neurological function.<sup>1,2</sup> Although studies have proposed that music therapy has an effect on dialysis and kidney transplant patients solid evidence of its utility is lacking in the areas of peritoneal dialysis. The etiology of chronic kidney diseases varies considerably throughout India, with part of the states of undivided Andhra Pradesh , Odisha and Goa having high levels of chronic kidney diseases of unknown etiology<sup>3</sup> Depression and stress is common, under diagnosed problem and an independent risk factor for increased morbidity and mortality in these patients.<sup>4</sup> Literature has shown the therapeutic effect of music on physical and emotional wellbeing of HD patients, analysis of these studies showed that musical intervention effectively reduced anxiety symptoms in HD patients therefore just listening to music can provide relaxation effects. Music therapy as a science and technology has explained that it has explicit therapeutic goals – thus use of music for therapeutic purposes<sup>5,6,7,8</sup> Music therapy is being practiced in various hospitals<sup>9,10</sup> and found as an effective therapy for treatment of depression<sup>11</sup>. On PD patients studies are not available Therefore, the objective of this study was to evaluate the effect of music therapy on Peritoneal dialysis patients.

Depression and stress is a common and under diagnosed problem and an independent risk factor for increased morbidity and mortality in these patients.<sup>12</sup> Literature has shown the therapeutic effect of music on physical and emotional wellbeing of HD patients, analysis of these studies showed that musical intervention effectively, reduced anxiety symptoms in HD patients therefore just listening to music can provide relaxation effects. Music therapy is being practiced in various hospitals,<sup>13,14</sup> and found as an effective therapy for the treatment of depression<sup>15</sup>. On peritoneal dialysis studies are not available.

## **METHODOLOGY**

Fifteen patients, 9 males and 5 females on peritoneal dialysis for 4 years were contacted to assess the quality of life. Socio demographic profile consisting of age, height, weight, educational qualifications, employment details, housing, financial security and monthly expenditure on dialysis was collected. The quality of life scoring scale of Falngan modified by Buchardt (1993)<sup>16,17</sup> was used. It

contains 16 aspects of quality of life on 7-point scoring scale – which specifies as 7 points as delighted, 6 points - pleased, 5 for mostly satisfied, 4 points for mixed, 3 for mostly dissatisfied, 2 for unhappy and 1 point Terrible . Each individual is given one form, they will have to encircle against each of the 16 points their perception on the 7 point scale. All scores of each individual are added and the average score is calculated separately for men and women. All these patients were given medical nutrition therapy and music therapy apart from medicines and exercise.

## RESULTS AND DISCUSSION

Demographic profile: Both men and women are qualified. Among women two studied up to high school while three are graduates and one is an engineer. In the case of men six of them are engineers. Women are homemakers, none of them are working. Men are employed in central, state government, and corporate sectors. (Table 1) Regarding housing 7 among men and 5 women have their own house. Others stay in rented house. All of them are having some type of financial security, at least up to using CAPD that is manual home dialysis. Only three of them who were under CGHS coverage could manage a machine run peritoneal dialysis. Cost of peritoneal dialysis under the CAPD program was around Rs. 35,000/- only for fluids and accessories. One has to manage gloves dressing material and other consumables which would work out around Rs.5000/- per month, they are not covered under any scheme. In the case of APD the cost is Rs.45000/- plus other accessories and consumables.

**Table 1 : Socio Demographic Profile of The Patients**

		Males	Females
No		9	6
Educational Level	High School		2
	Degree	3	3
	Engineering	6	1
Occupation	State government	4	
	Central government	4	
	Private	1	
	Not employed		6
Housing	Own house	7	5
	Rented	2	1
Financial Security	Central Govt Health Scheme	(3 APD+ 1 CAPD) -4	CAPD-4
	State Government	2	
	ESI	1	CAPD-2
	Private	1	
	Insurance	1	
Appr.Cost	CAPD Rs.35000/- to 45,000/- per month		
	APD Rs.45000/- to 60,000/- per month		
Additional cost of machine (APD) Apporx.5,00,000			

All are eligible only for CAPD while only three for APD. The weight and height particulars of the patients indicated that none of them are in the normal category. Women are more obese than men. There was no accumulation of fluid in any patient. Ponderalindex also indicated that all of them are obese.( Table 2)

**Table 2 :BMI of the Patients on Music Therapy**

<b>PARTICULARS</b>	<b>MALES</b>	<b>FEMALES</b>
No	9	6
AV. Height	178.2	155.8
Av. Weight	92.1	78.3
BMI	28.9	32.2
Over Weight	5	3
Obese Category I	4	1
Obese Category II	0	2
Ponderal Index	16.5	20.7

Studies indicated that stress level increases and confidence levels decrease among patients on dialysis. The only soothing, cheap and easy to administer method was music therapy .Quality of life as assessed before and after music therapy is given in Table 3.

Quality of life of all patients was assessed using the quality of life scoring scale of Falngan modified by Buchardt<sup>16,17</sup>. The average scores under each of the sixteen variables and the consolidated score indicated that both women and men improved their attitude after music therapy. From 51.9 to 100.3 among men and among women it is 65.7 to 100.8.the difference in the initial level is higher in women as compared to men however after therapy both sexes responded similarly. Impact of music therapy on the quality of life among women increased by 35.1points from total average score of 65.7 to 100.8. while in men the increase is slightly more from 51.6 to 100.3 the difference between the initial and Maximum score of 7is secured by women for Serial numbers 1,3,4,5,10,11,12,14 and 15. In the case of men only one for the serial NO. 5 has the maximum score of 7 .

**Table 3: Quality of Life of Patients on Peritoneal Dialysis before and after Music Therapy**

PARTICULARS		FEMALES (6)		MALES (9)	
		Before Music therapy Av. Score	After Music therapy Av. Score	Before Music therapy Av. Score	After Music therapy Av. Score
1	Material comforts home, food conveniences, financial security	5	7	3.6	6.3
2	Health -being physically fit and vigorous	5	6	2.7	6.0
3	Relations ship with parents, siblings other relatives , visiting communicating helping	4.5	7	3.3	6.6
4	Having and rearing children	4.7	7	3.3	5.9
5	Close relationship with spouse or significant other	5	7	3.2	7.0
6	Close friends	4.5	6.8	4.2	6.7
7	Helping and encouraging others , volunteering ,giving advice	3.8	6.6	2.8	6.7
	Participating in organizations and public affairs	4.2	6.5	2.4	6.1
9	Learning attending aschool , improving ,understanding ,getting additional knowledge	4.5	6.5	3.9	6.3
10	understanding yourself -knowing your assets and limitations -knowing what life is about	3.8	7	3.7	6.2
11	Work -job or Home	3.3	7	3.1	6.4
12	Expressing yourself creatively	3.5	7	3.6	6.0
13	socializing - meeting other people , doing things , parties etc.	3.3	6.8	3.6	5.9
14	Reading ,listening , to music, or observing entertainment	4	6.6	2.8	6.1
15	Participating inactive recreation	3.2	6.5	1.9	6.1
16	Independence , doing for yourself	3.2	6.5	3.6	6.0
Max Score for each component is 7 7 x16 points = Total score is 112		65.7/112	100.8/112	51.9/112	100.3/ 112

The inference is that music therapy had a very good impact on the quality of life of these patients on peritoneal dialysis . The positive point is that in the period of 4 years of monitoring none of them contacted any infections.

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