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A Cast Study :

Music Therapy: A Pleasant Way of Managing Depression

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Music has well established psychological effects, including the induction and modification of cognitive status, mood and emotions. The present study was designed to investigate the role of devotional music in the management of depression. This study was carried out on forty five indoor patients suffering with depression admitted at Gupta Hospital, Hisar. The Music Therapy sessions were administered in a sound proof environment in the presence of a psychiatrist and clinical psychologist. Music Therapy remarkably improved the speech, orientation, memory and concentration ability of depressed patients. Furthermore, Music Therapy had positive influence on the cognition status and general behaviour of patients. These findings suggested that Music Therapy has potential to produce antidepressant effects, when used judiciously. This study provides clinical evidence for the effectiveness of Music Therapy in patients of all abilities, ages and communities.

Key words : Music, Depression, Cognition, Brain, Orientation.

INTRODUCTION

Music has well established psychological effects, including the induction and modification of cognitive status, mood and emotions. Music Therapy interventions can be designed to manage stress, alleviate pain, enhance memory, improve communication, and provide unique opportunities for interaction. Research in Music Therapy supports the effectiveness of interventions in many areas such as facilitating movement, increasing motivation to engage in treatment, providing emotional support for patients and creating an outlet for expression of feelings (Gottel *et al*., 2003). Since Music Therapy is a powerful and non –threatening medium, unique outcomes are possible (Parle and Parle, 2006). Music therapy possesses the mystical curing powers, which can tremendously improve the quality of life of a depressed patient. Music is an age-old part of Ayurveda, the holistic Indian System of Medicine, which promises a healthy life style. Music knows no boundaries. Music can be found in every nook and corner of the world.

Clinical studies provide sufficient evidence indicating that Music Therapy works well even in those who are resistant to other treatment approaches (Zarte and Diaz, 2001). How do we now approach depression, a condition that has been identified since antiquity but is still conceptualized as a common and complex disorder of unknown aetiology? A triad of symptoms clinically characterize depression: low mood, anhedonia and low energy levels. Other symptoms, such as sleep disturbances, pessimism, guilty feelings, low self–esteem, succidal tendencies, and food- intake dysregulation, are also often present, because, each of the above symptoms are not qualitatively different from experiences all of us have at some point in our lives, depression is frequently not detected or misdiagnosed. The prevalence of depression is consistently high worldwide, and is associated with considerable morbidity. The disease is more prevalent in women, the female:male ratio being 5:2. There are now dozens of approved drugs, which belong to four different classes- tricyclic drugs, selective serotonin reuptake inhibitors, MAO- inhibitors and miscellaneous antidepressants. Each drug has a success rate of about 60%. When patients do not respond to one particular drug, they are switched to a another one, usually of a different class, until various classes of antidepressants are tried. At present, the choice of medication is completely arbitrary and often based on their side effect profile (Wong and Licinio, 2001).

Since allopathic medicines attack selected symptoms of depression and exhibit adverse effects, complimentary therapies (Parle and Vasudevan, 2007; Vasudevan and Parle, 2007; Vasudevan and Parle, 2006) such as Music Therapy are becoming popular (Parle and Parle, 2006). The purpose of any therapy is to improve the physical and mental well being of a person. Decision making ability

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and cognitive performance of persons undergoing Music Therapy was significantly improved (Koger and Brotons, 2000). Music Therapy stimulated both the hemispheres of the brain, hippocampus, cerebral cortex and medullary centers, thereby improving co-ordination of various body parts, speech, language skills and self-esteem (Koger and Brotons, 2000). Evidence is pouring in showing improvements in the ability of children and adults in expressing emotions, feelings and judgment. In the light of above we were interested to elucidate the usefulness of devotional music in the recovery of depressed patients.

MATERIALS AND METHODS

Experimental design :

This research project was carried out at Gupta Hospital, Sector-14, Hisar with the kind cooperation of psychiatrist Dr. Narender Kumar Gupta.MD.

Subjects (Research participants):

Forty five indoor patients admitted at Gupta Hospital during the period from 1st September to 31st December, 2007 served as research participants. Both, male and female patients participated in this study. The age of patients varied from 18 years to 60 years. All the patients belonged to Haryana State in India. For administering Music Therapy, only such patients, who were diagnosed to be suffering from depression were selected. Patients suffering with other mental disorders were excluded from this study. Medical history was recorded of each patient soon after admission. EEG was observed before and after Music Therapy session for each patient. The general mental state of patients was assessed by observing their fluency in speech, orientation(understanding of time and place), ability to concentrate and coginitive status (perception, thought process, mood swings, general intelligence judgement) with the help of the clinical psychologist. The performance of patients (in respect of speech, orientation, concentration, memory, coginition) was rated as - = poor, — = defective or —- = impaired indicating progessively the severity of the abnormality. The improvement in the mental state of partients after Music Therapy was recorded as + = average, ++ = proper or +++ = excellent.

Music Therapy sessions:

There were twenty five patients in control group who did not receive Music Therapy. These patients, however, underwent antidepressant treatment from the day of admission till discharge from the hospital. Twenty patients consented to participate in the research project and received Music Therapy in two sessions per day lasting for 30 min each. Morning session of Music Therapy commenced at 9 AM and evening session at 6 PM. A minimum of 10 sessions spread over 5 days were administered to these patients. However, two patients had recovered considerably from depression and exhibited normal behavior after just two days (4 Music Therapy sessions). These two patients were discharged from the hospital, hence were not available for further Music Therapy intervention. The Music Therapy sessions were administered in a sound proof environment in the presence of the psychiatrist and the clinical psychologist. A collection of Indian devotional songs (compiled in CD) familiar to elderly patients were used uniformly throughout this study. Lady patients received Music Therapy in presence of their relative/guardian, there by providing a safe and secure environment. All the patients received classical antidepressant treatment (Clomiperamine -10mg TDS / Nortriptyline) on the day of admission two times in a day. Some patients also received lorazepam injection on first day to take care of there sleep complaints. However, from second day onwords sedative(lorazepam) was removed from the treatment.

RESULTS AND DISCUSSION

Sixteen patients out of twenty patients, who participated in the research project and received Music Therapy showed fast recovery from depressive symptoms and exhibited normal behavior after 10 sessions (5 days) of Music Therapy. Remaining 4 patients had recovered considerably from depression and exhibited normal behavior after just 2 days of Music Therapy (4 Music Therapy sessions). Hence these 4 patients were discharged from the hospital and did not take any medicine or Music Therapy thereafter. EEG was found to be normal in all the patients under study before and after Music Therapy and the general mental state of all patients was improved remarkably after Music Therapy (Table 1). In nutshell, the speech of depressed patients was more fluent; orientation had improved from poor to proper state and these patients showed sharp memory after Music Therapy intervention. The patients, who received Music Therapy sessions were able to concentrate effectively as compared to the concentration ability tested before administering Music Therapy. The cognition status of these patients was assessed by testing their perception, mood swings; general intelligence and judgment. Music Therapy had positive influence on these cognitive parameters and the patients exhibited better perception, stable mind, good intelligence and fine decision making ability. Twenty five

Table 1 : Effect of music therapy (MT) on general mental state of patients

Patient	Before Music Therapy					After Music Therapy				
	Speech	Orientation	Conc.	Memory	Cognition	Speech	Orientation	Conc.	Memory	Cognition
I	-	-	-	-	- -	++	+	+	+	++
II	-	-	-	-	-	+	+	-	+	++
III	-	-	-	-	- -	+	+	+	+	++
IV	- -	-	- -	-	-	++	+	+	+	+
V	- -	-	-	-	- -	++	+	+	+	++
VI	-	-	-	-	- - -	++	+	+	+	+
VII	-	-	-	-	- -	+	+	+	+	++
VIII	- -	-	-	-	-	+	+	+	+	+
IX	-	-	-	-	- -	++	+	+	+	++
X	-	-	-	-	-	+	+	+	+	+
XI	-	-	- -	-	- - -	+	+	+	+	++
XII	-	-	- -	-	-	+	+	+	+	+
XIII	- - -	- -	-	- -	- -	++	++	+	+	++
XIV	-	-	-	-	- -	+	+	+	+	+
XV	-	-	-	-	- -	+	+	+	+	+
XVI	-	-	-	-	- -	++	+	+	+	+
XVII	- -	-	-	-	- -	+	+	+	+	+
XVIII	- -	-	-	-	- -	++	+	+	+	+
XIX	- -	-	-	-	- -	+++	+	+	+	++
XX	-	-	-	-	- -	+	+	+	+	++

- = Poor; - - = Defective; - - - = Impaired + = Average; ++ = Proper;
+++ = Excellent Conc. = Ability to concentrate

patients who did not receive music therapy (control group) exhibited headache and disturbed night-sleep during hospital stay and were advised to take antidepressants even after discharge from the hospital. On the other hand, the patients who received Music Therapy experienced sound sleep at night and did not complain of headache during hospital stay. Thus, Music Therapy had been effective in alleviating various symptoms of depression and improved overall behavior and mental state of the patients as reflected by their good conduct, improved co-operation with hospital staff, good expression, positive attitude and increased interest in life.

India has only one psychiatrist for approximately half a million population, the situation being much worse in rural areas because of concentration of professionals in cities. Furthermore, the awareness knowledge and skills of primary health care providers in identification and care of depression are very inadequate. Though, the National Mental Health Programme is aiming to provide the necessary training to primary health care providers in basic mental health care, the coverage so far has been far from adequate (Saxena and Bertolote, 2005). In view of above fact, Music Therapy can be considered as an additional/ alternative means of treatment for benefit of depressed patients. There are 350 million patients worldwide affected by depression and 18 million people in United States alone according to WHO report (Greden, 2001). Recent estimates have suggested that only 10% patients with depression are likely to receive adequates treatment. It has been repeatedly reported that 40-50 % patients suffering with depression do not seek treatment for their illness. Depression costs the US economy, directly and indirectly, over 43 billion dollars per year and it is a leading cause of disability worldwide. Suicide, which is usually a consequence of depression, is the eighth leading cause of death in the United States. The rate of suicide is even more alarming, when it is examined as a function of age. Suicide is the sixth leading cause of death in the 5–14 age group, the third leading cause of death in the 15–24 age group, and the fourth leading cause of death in the 25–44 age group. It seems that the incidence of major depression is increasing and that the onset of this condition occurs at a younger age now than in previous generations (Wong and Licinio, 2001).

Music Therapy is an innovative, artistic, scientific and evidence based method of restoring, maintaining and improving the emotional, physiological and psychological well-being of human beings of all ages and abilities through

the power of music. Music knows no boundaries. It pervades everywhere irrespective of caste, creed, culture, national barriers or blood-brain barrier. It forms an integral part of our lives. Music is a form of sensory stimulation, which provokes responses due to the familiarity, predictability, and feelings of security associated with it (Parle and Parle, 2006). Typically, the course of depression is recurrent; patients go through periods with symptomatic depressive episodes and periods of recovery. However, 17% of patients have a chronic unremitting course (Wong and Licinio, 2001). In the present study, Music Therapy had been effective in alleviating various symptoms of depression and improved overall behavior and mental state of the patients. These findings are in line with the reports in literature (Siedliecki and Marion, 2006).

Since allopathic medicines attack selected symptoms of depression and exhibit adverse effects, complimentary therapies such as Music Therapy are becoming popular. Music Therapy aims at exerting a possible beneficial effect on social, emotional and cognitive skills and helps in reducing the behavioral problems of patients with dementia (Koger and Brotons, 2000). Music can be used to modify environmental stimuli and some types of music may create a neutral environment to mask noises and prevent over-stimulation (Sung and Chang, 2005). Decision making ability and cognitive performance of persons undergoing Music Therapy was significantly improved (Koger and Brotons, 2000). Music helped to captivate attention (Gregory, 2002) and improved concentration, which consequently strengthened sensory, short term and long-term memory (Parle and Khanna, 2006, Zarte and Diaz, 2001). Music not only facilitated social interaction but also built confidence(Zarte and Diaz, 2001). The mechanism by which music modifed brain function is not clear (Sutoo and Akiyama, 2004). Music Therapy stimulated hippocampus, cerebral cortex and medullary centers, thereby improving co-ordination of various body parts. Evidence is pouring in showing improvements in the ability of children and adults in expressing emotions, feelings and judgment (Koger and Brotons, 2000). Melodic Intonation Therapy is useful in recovery from aphasia. Music serves as a source of continuous motivation. Music Therapy transforms introvert individuals into extroverts. It has been observed that as the movements become more regular and powerful, motor skills are improved (Aldrige, 1994). Since stress is one of the root causes of many diseases, Music Therapy could prove beneficial owing to its calming, sedative and feel-good (euphoric) effects. Expousre to Music significantly increased serum calcium levels and neostrital dopamine levels (Sutoo and Akiyama, 2004).

In this research project, we investigated the speech, orientation, concentration ability, memory and cognitive status of various patients diagnosed with depression at Gupta Hospital, Hisar. At the time of admission, the self expression of patients was incoherent and distorted. The speech of these patients was fluent, orientation had considerably been improved from poor to proper state and these patients showed sharp memory after Music Therapy intervention. These results are in aggrement with the studies of Brotons and Koger (2000), who showed that Music Therapy significantly improved performance on speech content and fluency dimension in dementia patients. Furthermore Music Therapy considerably improved mood, facial expression and verbalization in chronically ill patients (Gallagher *et al.*, 2006). Both, live and taped Music significantly reduced agitation, enhanced orientation and improved memory in post traumatic amnesia patients (Baker, 2001). In the present study, the cognition status of these patients was assessed by testing their perception, mood swings, general intelligence and judgment. Music Therapy had positive influence on these cognitive parameters and the patients exhibited better perception, stable mind, good intelligence and fine decision making ability. Music may activate cognitive processes specifically related to musical signal perception and processing. Music is a complex signal composed according to the rules of tonality and harmony and the human brain is thought to implicitly form expectations in accordance with traditional musical styles and cultural preferences (Loui *et al.*, 2005). Exposure to Music has been found to produce improvement in cognitive performance in several studies (Thompson *et al.*, 2005). The patients, who received Music Therapy sessions were able to concentrate effectively as compared to the concentration ability tested before administering Music Therapy. Music facilitated concentration, problem solving ability, cognitive function and stimulated long term memory recall in Alzheimer patients (Aldrige,1994). These findings suggested that Music Therapy has potential to produce antidepressant activity, when used judiciously. The days are not far off, when Music Therapy could be combined with allopathic medicines for optimal effects and to minimize the side effects of antidepressants medicines.

Conclution:

In conclusion, this study provides clinical evidence for the effectiveness of Music Therapy in managing patients suffering from depression. People of all abilities, ages and communities can participate in this therapy. Furthermore, Music Therapy provided dramatic relief from depression

without any side effects. Music has the unique capability of bringing back charm and improve the quality of life of depressed patients. The days are not far off, when Music Therapy would be preferred over other medical therapies for managing depression.

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