



EFFECT OF MUSIC THERAPY ON DEPRESSION AMONG INMATES OF SELECTED OLD AGE HOMES: AN EXPERIMENTAL STUDY

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ABSTRACT

Depression in old age is an important public health problem causing considerable morbidity and disability worldwide. An experimental study was conducted to assess the level of depression and evaluate the effect of music therapy on depression among inmates of old age homes. The level of depression of inmates was assessed in both settings and identified mild and moderate level of depression among inmates by interview method using Modified Yesavage geriatric depression scale. The investigator selected 60 inmates as subjects by Simple Random Sampling Technique, 30 inmates in experimental group and 30 in control group. The subjects in the experimental group were exposed to music therapy for 21 days (45 minutes daily) and control group were sent for daily routine activities. 3 posttests were conducted with 1 week interval. Out of total inmates assessed, 81.66% of them had depressive disorder. There was significant reduction in depression score after the music therapy in experimental group. There was no significant association between level of depression and selected socio demographic variables.

KEYWORDS : Depression; Old age homes; Music therapy

Introduction

Old age is inevitable. Every person on the earth has a dream of living a long life. It is no more a dream as it has become possible because of the advancement in the field of medical sciences. But old age is the most critical stage a person goes through. It is the stage where man faces problems physically, mentally, socially, and even economically.

Depression is a common problem affecting about 121 million people worldwide and is characterized by persistent low mood, which leads to changes in appetite, sleep pattern and overall functioning. Depressive disorders are with a prevalence of 5-10% in Primary Care settings. They rank fourth as causes of disability worldwide, and it has been projected that they may rank second by the year 2020. This disorder is characterized by a marked lowering of self esteem and feelings of worthlessness and guilt. Symptoms further include anhedonia, fatigue and impaired concentration. At the worst, depression can lead to suicide, which is associated with the loss of one million lives per year. It occurs in persons of all genders, ages and backgrounds.

In an Indian study conducted to assess the psychiatric morbidity in non-psychiatric geriatric inpatients, the most common psychiatric disorder was depression (25.94%).⁵ Whereas in a review of population studies concerning the prevalence of late-life depression of clinical significance (major and minor depression) found an average prevalence of 13.5%.⁷ A field-survey was conducted on psychiatric morbidity of the elderly population of a rural community in West Bengal reported 61% of the elderly population was mentally ill. The overwhelming majority of the affected persons were depressives.

A study was conducted to assess the depression among the elderly in Udhya Village of Udipi district, Karnataka reported that about (58%) had moderate depression and about 19% of had severe depression. A study done in Taiwan reported that, older people who live in nursing homes suffer from more depressive symptoms than those in community dwellings. To maintain and improve the health status for the elderly as much as possible, healthcare providers at nursing homes should develop an effective health promotion program for these older people.

A randomized controlled study was conducted from July 2009-June 2010 at participants' home in Singapore to determine the effect of music on depression levels in older adults. In total, 50 older adults (24 using music and 26 control) completed the study after being recruited. Participants listened to their choice of music for 30 minutes per week for eight weeks. Depression levels reduced weekly in the music group, indicating a cumulative dose effect, and a statistically significant reduction in depression levels was found

over time in the music group compared with non-music group.

Materials and methods

An experimental study using two group pre test post design following a quantitative approach was conducted among sixty subjects recruited randomly in old age homes, Care home Chackai and Sri. Karthika Thirunal Lakshmi Bayi Geriatric Centre, Poojappura, TVPM. The initial draft of the tool was prepared by the investigator after an extensive review of literature and discussion with nursing experts. The Geriatric Depression Scale (GDS) was first created by Yesavage has been tested and used extensively with the older population for screening depression. The GDS was found to have 92% sensitivity and 89% specificity when evaluated against diagnostic criteria. The validity and reliability of the tool have been supported through both clinical practice and research ($r=0.84$). The questionnaire consists of 30 yes or no type of item. The reliability of Modified Yesavage Geriatric Depression Scale was established by split half method. The correlation was found using Spearman Brown prophecy formula. The reliability 'r' value was 0.81. The prepared tool with criteria checklist designed for validation was submitted to eight experts in the field of psychiatric nursing, psychiatry, psychology and biostatistics.

Music therapy – Procedure

Music therapy was given (3 weeks continuously) for a time period of 45 minutes every day. Intervention is given only to experimental group for 21 days along with their usual daily activities. Control group remained with their usual activities only. The therapy was given in a hall without any external disturbances. Speakers were used. Hamsadhvani raga – instrumental is used for the therapy. Flute is the principal instrument used. Famous compositions using flute and percussion instruments (Tabla) are employed. The investigator had consulted with music therapists and music experts. Music CD was developed under their guidance. Hamsadhvani (Sound of Swans) is a raga in Carnatic music (musical scale of South Indian classical music). It is ajanya raga (derived scale), as it does not have all the seven swaras (musical notes). The study was conducted only after the approval of institutional ethical committee. The formal consent was obtained from the old age home authorities before proceeding to the study.

Results

1. Description of sample characteristics

Among the total inmates assessed, 56.7% were males and 43.3% were females. 86.7% of subjects in experimental group and 93.3% of subjects in control group belong to Hindu religion. 43.3% of subjects in experimental group were married and 23.3% were unmarried while 26.7% were widow/widowers. 53.3% in control group were widow/widowers, 16.7% were married and 10% were unmarried. 46.7% of subjects in experimental group and 33.3% of

subjects in control group have primary education. 46.7% of subjects in experimental group were private employees and 26.7% of subjects were handling household affairs. In control group, 23.3% of subjects were private employees and 26.7% of them were Government employees and with household affairs. 36.7% of subjects in experimental group had no children and 33.3% of subjects had more than two. In control group, 40.0% had more than two children and 26.7% had no children. 53.3% of subjects in experimental and 60% of subjects in control group belong to joint family. Majority of subjects in experimental group have income below 1500rs and 50% in control group have income between 1501rs and 5000rs. 73.3% of subjects in experimental group and 46.7% in control group have watching television as their hobby. Majority of subjects (56.7%) in both experimental and control group were staying with family in own house. 16.7% of subjects in both groups were staying alone in own house. 56.7% of subjects in experimental group & 60.0% in control group practice individual worship. Only 26.7% of subjects in experimental subjects and 16.7% of control group samples are on diet therapy. 36.7% and 23.3% of subjects in experimental group have diabetes and hypertension respectively. While 40% of control group subjects have diabetes and 36.7% have hypertension. In experimental 66.7% and 80.0% in control group are on treatment for physical illnesses. Among the subjects 76.7% in experimental group and 63.3% in control group does not have any sensory deficits. 70% of the subjects in experimental group and 60% of the subjects in control group have visitors only once in three months. Only 23.3% of the subjects in experimental & 36.7% in control group use adaptive devices.

2. Effect of music therapy on depression among inmates of old age homes.

Table 1: Mean, standard deviation and paired t value of level of depression among inmates before and after music therapy.

Group	Stage	Mean	SD	N	Mean Difference	Paired t	P
Experimental	Pre Test	17.4	3.0	30	4.8	9.86**	0.000
	Post Test	12.7	3.1	30			
Control	Pre Test	17.1	3.2	30	1.5	4.73**	0.000
	Post Test	18.6	2.8	30			

**:- Significant at 0.01 level

The average score of depression of inmates in experimental group are 17.4 and 12.7 respectively at pre test and post test level. A decrease in score of 4.8 can be observed as a result of intervention in experimental group. The paired t value (9.86), which is greater than the table value (2.75) for the df=29. The average score of depression of inmates in control group are 17.1 and 18.6 respectively at pre test and post test level. An increase in score of 1.5 can be observed. The paired t value (4.73, p<0.01) shows that the increase is statistically significant at 0.01 level.

3. Association between levels of depression and selected socio demographic variables.

ANOVA and t test was done for comparing depression level and selected demographic variables. There was no significant association between level of depression and selected socio demographic variables.

Discussion

In the present study, the result showed that among the experimental group the average score regarding depression are 17.4 and 12.7 respectively at pre test and post test level. A decrease in score of 4.8 can be observed as a result of intervention in experimental group. Hence it can be concluded that the music therapy is effective in reducing depression of old age home inmates. In control group, the average score regarding depression are 17.1 and 18.6 respectively at pre test and post test level. An increase in score of 1.5 can be observed. The mean posttest scores of

experimental and control group are 12.7 and 18.6 respectively. The difference between these posttest scores is statistically significant at 0.01 level. A similar study was conducted in Singapore to determine the effect of music on depression levels in older adults. Depression levels reduced weekly in the music group, indicating a cumulative dose effect, and a statistically significant reduction in depression levels was found over time in the music group compared with non-music group.

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