Abstract

The world wide demographic phenomenon of ‘Graying of the Nations’ is also a major demographic issue for India in the 21st century. Presently India has around 90 million elderly 12.6% of which is contributed by Kerala State alone. Due to increased dependency of these people some of them are forced to take services from old age homes. Often the medical and social problems of the elderly are overlooked and neglected by seeing them as a part of normal ageing. Depression is the most common among such neglected conditions, but it is the most treatable of all mental disorders, which if untreated can be fatal. Regular moderate physical activities play an important role in preventing depression, lifestyle diseases and for promoting cardiovascular health. Laughter yoga developed by Dr. Kataria is a therapeutic approach that can produce psychological and physiological benefits for the elderly. In order to offer patients the benefits of laughter health care professionals must be willing to break loose from conventional therapeutic constraints and they themselves must be able to laugh. The present study is on the effect of laughter yoga on selected psycho physiological variables among the elderly clients residing in the old age homes of Kottayam district.

Elderly clients who were 60 years and above living in randomly selected old age homes of Kottayam district were the study participants. Basic pre test post test experimental design with measurements every two weeks was carried out for a period of eight weeks. Psychological variables studied were morale (measured using the Philadelphia Geriatric Centre Morale Scale), Depression (measured by GDS and Hamilton rating Scale for Depression) and subjective well being (measured by WHO (five) well-being Index). Portable patient monitoring unit of BPL was used to measure the physiological variables like Heart rate, respiratory rate, blood pressure, peripheral skin temperature, Oxygen saturation and ECG.

Laughter Yoga was administered for 30 minutes per session for 6 days for 8 weeks in the Experimental group. The collected data were analyzed using descriptive and inferential statistical methods like Man-Whitney, Friedman and Chi-square tests. Majority of the participants were between the age group of 60-70
years (43.1%) and 58.2% were females. 43.1% of subjects only had voluntary admission to old age homes. 80.4% of subjects were suffering from chronic ailments. Scores of subjective well-being, and Morale were low and depression scores were high for both the experimental and the control group.

The experimental group subjects showed improvement in depression, morale and subjective well-being in the post tests at 0.05 level of significance ($\chi^2=38.099$, df=4, p=0.000 on GDS, $\chi^2=62.290$, df = 4 & p=0.000 on HRS for depression, $\chi^2=30.218$, df=4, p=0.000 on PGCMS and z= -8.464, p=0.000 for WHO (5) well-being Index respectively). On Physiological variables there was no statistically significant changes in heart rate ($\chi^2=1.320$, df=3 p=0.724), Oxygen saturation (z= -1.603, p= 0.109 (wk. 8)) and ECG (z= -1.129, p=0.259 (wk.8)). There was statistically significant difference in respiratory rate (z= -2.111, p=0.035 (8th wk)), Blood pressure (z= -3.137, p= 0.001 (8th wk) and peripheral skin temperature (z= 2.521, p=0.012 (8th wk)). Significant association was found between age and depression ($\chi^2=10.493$, df = 4, p=0.0333), gender and depression ($\chi^2=9.462$, df =2, p=0.009, elderly males showing more depression), marital status and depression (likelihood ratio = 22.904, df =8, p=0.003), nature of old age home placement and depression (likelihood ratio = 24.592, df =1, p=0.0001), physical dependence and depression (likelihood ratio = 12.211, df = 4, p=0.016.

Study results show evidence for the therapeutic effect of Laughter Yoga.

**Key Words: Laughter Yoga, Elderly Old age home inmates, morale, depression, subjective well-being, Psycho physiological variables, respiratory rate, heart rate, blood pressure, peripheral skin temperature, pulse oxymetry, oxygen saturation, ECG**