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Laughter Therapy for Depressive Symptoms among Elderly Residing in Geriatric Homes of Kerala

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Abstract:
Depression is one among many problems experienced by elderly who are residing in geriatric homes. The present study was aimed at assessing the effect of laughter therapy on depression among 30 elderly between the age group of 60-80 years residing in selected oldage homes which was based on Betty Neumann System Model. Semi structured interview schedule was used to collect socio demographic data; Modified Beck Depression Inventory was used to assess the level of depression of elderly. The Chronbachs Alpha of beck Depression inventory was high (r=0.92). The laughter therapy given to elderly residing in an oldage home has significantly reduced their level of depression (P<0.05). The study reveals that there was no significant association between level of depression and selected demographic variables (P>0.05). The findings have implication in nursing practice, education, administration and research. Laughter therapy may be an innovative option to promote a healthy environment for individuals in family and in other community settings.

Keywords: *Laughter therapy, depression, elderly, geriatric home*

1. Introduction

The ageing process is a biological reality which has its own dynamic, largely beyond human control. By 2050, 2 billion older persons are projected to be alive, implying that their number will once again triple over a span of 50 years. In Kerala the number of elderly aged 60 and above is 4.6 million in 2011 which was 3.3 million in 2001 census and 2.6 million in 1991. This constitute 11.2% of total population of the state. (Zacharia N & Rajan I 2011). Thrissur is a district of Kerala which is situated in the central part of the state, with a total population of 3110327 and elderly constituted 251835 that is, 8.09%.(Census report 2011)

According to Erikson's "Eight Stages of Life" theory, the human personality is developed in a series of eight stages that take place from the time of birth and continue on throughout an individual's complete life. He characterizes oldage as a period of "Integrity vs. Despair", during which a person focuses on reflecting back on their life(Erikson EH1968).

Depression has been found to occur at high rates in the oldage homes & nursing homes with prolonged illness like heart diseases, diabetes, chronic lung diseases & arthritis. (Rani MP 2002, Cole MG & Nandini Dendukuri 2003) which can increase the likelihood of death from those illnesses and reduction in the life satisfaction of elderly.(Celso et al 2003). Non pharmacological treatments are important particularly in elders who have co-morbid medical conditions and may experience more side effects with pharmacological treatment because of drug interactions and altered drug metabolism.(Noble RE 2003, Noyes MA 1997). Laughter therapy is a unique concept which uses laughter as a group exercise, as it is a physically oriented technique. Here the laughter is for no reason without relying on jokes, humor or comedy. The exercise can be adapted and modified according to the extend and ability of the individual with breathing techniques which brings more oxygen to the body and makes one feel more energetic and healthy.(Schneider G et al 2006)

Studies have proved that the body cannot differentiate between simulated and real laughter mainly in terms of its physical effects. Laughter therapy is the only technique that allows adults to achieve sustained laughter without involving in cognitive thought. It bypasses the intellectual systems that normally act as a brake on natural laughter(Madan Kataria 2010).

Most of the elders who resides in the oldage home lack their basic supportive mechanism, fail to create group coherence and interpersonal interaction with other members of the oldage home will lead to physiological and psychological breakdown. Laughter therapy creates a positive state of mind. It fosters a positive and hopeful attitude with increased optimism which is considered to be

useful, cost-effective and easily-accessible intervention that has positive effects on depression, insomnia, and sleep quality in the elderly (Mahvash Shahidiet al 2011). Laughter therapy promotes group formation and mutual interaction. It increases the coherence between the group members and gives a sustained effect. It adds zest and joy and gives meaning to life. (Madan kataria 2011).

2. Methodology

- Setting: A pre experimental approach was considered to be the most appropriate and adopted in order to assess the effect of laughter therapy on depression among elderly in selected geriatric homes of Thrissur district.
- Population: Elderly residing in selected geriatric homes in Thrissur district, with depressive symptoms
- Research design Pre experimental one group pre test post test design
- Measurements: Modified Beck Depression Inventory for measuring depression.
- Ethical consideration: The study was conducted between 11-02-2012 to 25-02-2012 after getting permission from the ethical committee of Medical College Hospital, Thrissur

3. Results

The mean age of the study participants is 69.6 with a standard deviation of 5.91. Majority of the sample were males (60%). Half of the study participants belong to Christian community (50%). And Hindus constitute 33.3% of study participants. Interestingly, percentages of Muslim were only 16.7%.

Approximately 73.3% samples were married, out of that 20% were widow or widower and 13.3% were separated or divorced. However, around 27% of study samples were unmarried. Majority of the sample (40%) has only primary education and 33.3% of total study samples have high school education and 26.7% have an education level of higher secondary and above. Among the elderly 30% were staying in the oldage home for less than one year. However, majority of elderly (47%) were residing in the geriatric home for around 1- 3 years. Only 23.3% of study participants were staying for 3- 5 years. The mean duration of stay in the oldage home by the participants is 2.1 with standard deviation of 1.43.

About 40% of the subjects are visited by their family members once in a month and 33.3% are not visited by any of their family members. 26.7% had luck to see their family members once in a year. Half of the study participants have no source for economic support. But roughly 30% of the participants enjoy governmental pensions like retirement pension and widow pension. 10% of participants are enjoying support from friends and still 10% incurs financial support from children.

All the subjects were suffering from either one or more physical problems such as diabetes mellitus, hypertension, and gastritis. In this study, both diabetes mellitus and hypertension shares equal proportion of 23.3% of total subjects. Out of that 10 participants have both diabetes mellitus and hypertension and they are on treatment. 26.7% of elderly have either history of other physical illness like headache, bronchitis, seizure and arthritis. 13.3% of total subjects had previous history of tuberculosis and they have taken anti tuberculosis drugs. Only 4 participants have gastritis.

Around 60% and 40% of samples have moderate and borderline depression, respectively before laughter therapy and after therapy, 73.3% have mild mood disturbance and 23.3% have borderline depression.

The mean pretest value of depression was 23.3 with standard deviation 4.06 and compared to post test mean 15.33 and standard deviation 2.60. The mean score of physical aspects of depression is 8.13 with standard deviation 2.43 in pretest compare to 6.33 mean score and 2.44 standard deviation in post test. The mean score of psychological aspects of depression was 15.2 with standard deviation 3.8 in pretest while in post test it was 9 and 2.99 respectively.

No.	Pre test			Post test			
	Domains	**Mean**	**Sd**	**Mean**	**Sd**	**df**	**t Value**
1	Physical aspects of depression	8.13	2.43	6.33	2.44	29	5.13*
2	Psychological aspects of depression	15.2	3.8	9	2.99	29	11.11*
3	Total	23.3	4.06	15.33	2.60	29	16.76*

Table 1: Difference in the mean level of depression of elderly before and after laughter therapy, n=30
** Significant at 0.05 level*

The minimum and maximum scores of level of depression of elderly shows progressive decrease from pretest to post test.

There were significant ($P<0.05$) difference in the mean scores of two domains of depression (physical and psychological aspects) after laughter therapy. The mean score of level of depression of elderly in post test is significantly lower than mean scores of level of depression in pretest. The calculated 't' value of physical aspects, psychological aspects and total depression score in Modified Beck Depression Inventory is 5.13, 11.11 and 16.76 respectively which are higher than table value.

4. Discussion

It was found in the study that about half of the elderly were between the age of 60-70 years and the mean age of the total study participants is 69.6 with standard deviation of 5.91. As per the 2011 census report of Kerala the proportion of the people in the age group of 75-79 years was more in Kerala when compared to the national. Kerala is clearly ahead of others with 7.2% of its population already in the age group of 65 years and over. Kerala is going through a period of rapid demographic aging due to improved medical facilities, reduced child mortality rate, low fertility rate etc. Indian aged population is currently the second largest in the world. A

study of aging in the state of Kerala described factors contributing to population aging above 60 years as changes in age composition, depending ratios, structural changes in the age and sex composition of the population (Census report 2011).

In the present study it was found that 60% of elderly were males. In Thrissur the total elderly population was 251835 among that 54.1% and 45.8% constitute female and male population respectively. It appears that more female elderly than male elderly are forced to go to old-age homes in the state (Rajan I.2008). Women have better life expectancy than men and are married to men who are older.

The study revealed that majority of elderly (40%) had primary education and 50% of the subjects were Christians whereas 33.3% were Hindus. The average literacy rate of thrissur district is 95.32 in 2011 (Census report 2011). According to Kerala oldage home inmate survey 72% elderly were Christians followed by Hindus with 26% (Rajan I.2008). In Thrissur there are about 25 oldage homes and most of them are run by Christian management, however, Thrissur has the highest Hindu population compared to Christians. In Kerala most of the children from Christian families are working abroad and are settled in their job place with their family. So there is no body to look after the aged parents. The elderly doesn't like to go abroad along with their children. They prefer to be in their own home or hometown. Lack of caregiver, isolation, along with health problems during oldage will pose the subjects to take shelter into an oldage home for their remaining lives. (Ghosh AB 2006)

The present study revealed that 33.3% were widowed or divorced and 27% were unmarried. This finding was a contrary to a survey conducted in oldage homes in Kerala, where the 44% of elderly were not married and another 8% belongs to widowed or divorced.(Rajan I.2008). Being unmarried, no children and lack of caregiver was the main reason for the elderly to seek admission in an oldage home.

In Kerala 67% of inmates in oldage home is not visited by family members (Rajan I.2008). However, in present study only 33.3% of elderly were not visited by any family members after their admission in geriatric homes. This might be because of problem with family members, children were abroad or no one to take cares them at home. Among the elderly 47% of them were staying in the oldage home for 1-3 years. Many of them were from poor socioeconomic status and half of them have no source of economic support.

Another important finding was that all the subjects were either suffering from physical illness or history of medical illness, such as diabetes mellitus, hypertension, headache, arthritis, etc. In this study, 33.3% of total participants have both diabetes mellitus and hypertension. 26.7% of elderly have either history of other physical illness like headache, bronchitis, seizure and arthritis. A study to estimate the health problems of the elderly in rural south India found that among 197 elderly, the majority of them (55 percent) had visual problems (cataract), followed by orthopedic problems. Of these 15.6 percent were hypertensive, 8.6 percent mainly widows needed assistance in physical activities like bathing, toilet, dressing, walking and eating. These findings were similar to the studies on the elderly done in the West, and demonstrate an urgent need towards planning for the elderly in India(Dev P& John G 2001)

Majority of them are having more than one physical illness and they are worried more on their physical problems. As people are living longer, older adults are vulnerable to problems of chronic illness and frail health. The feeling of worthlessness and hopelessness may increase and quality of life of many elderly was diminished when they are placed in a long-term care setting.(Dev P& John G 2001)

Only 30% of the inmates using their leisure time for reading and watching TV. In the oldage home they were having a structured daily activities including attending prayers, doing same simple work such as cutting vegetables, cleaning, gardening etc., getting nutritious food and for recreation they can watch TV. For most of the elderly this may not be possible in their own home because of poor socioeconomic status. However, most of the inmates of in the oldage home are not involved in all these activities as they have pessimistic feelings, monotony of life, despair and so on

The present study revealed that laughter therapy made a significant decrease in the person's level of depression. By using modified Beck Depression Inventory score 60% of elderly have moderate depression and 40% have borderline depression before laughter therapy, after the intervention 73.3% of them have only mild mood disturbances. An Epidemiologic cross sectional study was conducted to measure prevalence & associated factors of undetected depression in Institutionalized older people. Stratified clusters Sample of residents over 65 years of age were selected. 10 item geriatric depression scales were used to measure depression. The results show that 45.1% had depression and 108 had depression, which was undetected.(Tahir MK et al. 2009). The investigator found that most of the elderly were from low socioeconomic status and most of them had lot of problems in their home and were not satisfied with their home atmosphere.

Another important finding in the present study is the pre test and post test mean score difference of the psychological aspects of the depression is 6.2, but the mean score difference of physiological aspects of depression is 1.8. This finding was comparatively similar to an experimental study to find the effect of laughter therapy on depressed elderly. The results show that laughter therapy has effect on elderly with moderate to severe depression and significant effects for cheerfulness, seriousness, bad mood and satisfaction with life (Hirsch RD et al. 2010). That is, the psychological aspects of depression. Another comparative study of laughter therapy and group exercise in depressed older adult women revealed a significant difference in depression scores of both laughter and physical exercise therapy group (Mahvash Shahidiet al 2011)

An interesting finding in the present study is that no elderly was found to be very much sad without any reason following laughter therapy and in 81% subjects irritability was reduced to some extent after laughter therapy. They were able to control their anger and there was reduction is anxiety and tension. Getting easily upset for criticism was also reduced to 4.8% after therapy, which was 24% before. Laughter therapy has an effect on immediate mood states.

Among the elderly 80% of them reported reduced sleep disturbance. Studies explored the effect of laughter in improving the sleep quality(Madan Kataria 2010). In order to improve the depressive feelings of the elderly, better subjective sleep sufficiency and alleviation of sleep disorders are necessary.

Findings in this study revealed that 60.4% of the participants in oldage home were to some extent reduce their work inhibition and social withdrawal followed by laughter therapy. About 53.4% elderly have reduced their fatigability as they had tired from doing almost anything before laughter therapy. A pre experimental study conducted to find out the effect of laughter therapy on subjective wellbeing of elderly in selected oldage homes in Kottayam district. The domains in the Subjective Wellbeing Inventory (SUBI) like deficiency in social contacts, perceived ill health, confidence, coping have significant ($P<0.05$) difference in mean scores after laughter therapy(Mubarak Muhammad 2010).

In the present study no significant association was found between level of depression and selected demographic variables like age, gender, marital status, educational status, previous occupation, source of economic support, duration of stay and visit by family members. Some studies supported the association between depression and demographic factors. Women consistently reported as having a twofold lifetime prevalence of depression and a greater likelihood of seeking help for depression than men.(Wilhelm, K., & Roy, K. 2003). Costa et al identified a strong association between the prevalence of symptoms of depression and age.(Costa et al 2007).

The major limitations of the study includes

- Since the study was conducted in an institutional set up generalization of findings for community dwelling population of the aged remain restricted.
- As the study sample is limited to 30 and sampling technique was purposive, generalization of the findings is limited.
- Laughter therapy was given for thirty minutes duration and for fourteen days only.
- Physiological parameters of well being were not included in the study.
- Available time for the conduct of the study was limited.
- Elderly more than 80 years were not included in the study.
- Because of the time constraints follow up of longer duration could not be made.

5. Conclusion

The following conclusions were drawn on the basis of the findings of the study:

- Elderly staying in the geriatric homes suffer from various levels of depression
- The study has brought out the fact that there was significant reduction of levels of depression among elderly residing in oldage homes after laughter therapy.
- Present study did not find any significant association between level of depression and selected variables like age, sex, marital status etc.

Laughter therapy can help the nurses to provide a multifaceted participatory care while increasing the quality of care and patient satisfaction. In nursing practice, laughter therapy can be incorporated in planning and implementing the patient care as it lacks adverse reactions, is a non-invasive therapy, relationally inexpensive in case of administration.

Nurse administrators have to take initiatives in implementing these programmes in nursing curricula and to establish geriatric training programmes for nurses and faculty to enhance their knowledge to the future nursing. Nursing administrators may make sure that nursing staff posted in the psychiatric as well as other wards are qualified enough in the field of laughter therapy. The administrator can make budgetary provisions for training nursing personnel on psychosocial therapies including laughter Therapy in consultation with governmental and non-governmental organizations.

Nurse researchers can further explore various ways of behavioral techniques and psychosocial interventions for managing depression seen in elderly clients.

There are lots of studies on effect of laughter therapy on various health problems of the elderly. Effect of laughter on depression among elderly is very few. Indian studies on laughter therapy are very less in number. Its effects on depression and other mental health disorders have to be explored and studies regarding the topic should be encouraged. Due to increasing number of elderly population, elderly problems and oldage home nurses, should conduct further research on the effect of laughter therapy on various other problems of elderly.

Nursing faculty might consider incorporating laughter therapy techniques in psychiatric nursing curricula with more emphasis on specific psychotherapeutic interventions. Provision should be made in the curricula to have practical experience in rendering psychotherapeutic interventions so that students' knowledge and skill for providing comprehensive care to patients with psychological problems can be enhanced.

Moreover, while formulating the philosophy and objectives of an educational institution, the much importance should be given for complementary and alternative therapies including laughter therapy for patient care in hospital as well as in the community by nurse educators.

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