

**EFFECTIVENESS OF HUMOR THERAPY UPON DEPRESSION AMONG
THE ELDERLY**

**BY
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**A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R.MEDICAL
UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER
OF SCIENCE IN NURSING**

MARCH 2011

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THE ELDERLY**

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DECLARATION

I hereby declare that the present dissertation entitled “**Effectiveness of Humor Therapy upon depression among the elderly**” is the outcome of the original research work undertaken and carried out by me, under the guidance of **Prof (Dr). Latha Venkatesan, M.Sc (N), M. Phil., Ph.D.** Principal, Apollo College of Nursing and **Prof. K.Vijayalakshmi, M.Sc (N), M.A. Psychology, Ph.D,** HOD, Department of Mental Health Nursing, Apollo College of Nursing, Chennai.

I also declare that the material of this has not formed in anyway, the basis for the award of any degree or diploma in this University or any other Universities.

CHAPTER - I

INTRODUCTION

Back ground of the study

“A smile is the shortest distance between two people” -Victor Borge.

Aging is a natural process. Old age is an inevitable one. Old age is a crucial phase where the physiological, psychological and sociocultural changes make elderly to develop depression. The concept of “old” has changed drastically over the years. Our prehistoric ancestors probably had a life span of 40 years, with the average individual living around 18 years.

Old age is viewed both as a stage in the life span of an individual and also a segment of a population in the society. The public considers people who are 50-75 years of age as old. Developmental psychologists consider age sixty as the demarking line between middle and old age, whereas social researchers set the boundary of old age as 65.

There are currently 550 million elderly aged 60 and over in the world, and of these 335 million live in the developing countries, within the last fifty years. The rate of accelerated death in developing countries has visibly decreased and life expectancy at birth has increased from 41 years in the early 1950's to 62 years in 1990. In the year 2020, life expectancy at birth is predicted to reach 70. In India about 7% of the elderly population is over the age of 60 and it is expected to increase by 20% by the year 2030.

In a study conducted by Vijayamunni (1997) it was reported that according to the population projections for the next 20 years period, worked out by the expert

commissioners of India, the 60 plus population of India will grow from 56 million in 1991 to 96 million in 2011 and 113 million in 2016.

Major depressive disorders is currently one of the leading causes of disability worldwide and projected by the WHO, to become the second leading cause of disability after heart disease by the year 2020. Some amount of tension [or] conflict need to be created within individual for the betterment of their life. When the individual adapts to the situation with positive emotions he overcomes the stress but when he fails to adopt [or] fails to use his coping mechanism, he goes for the fluctuation in the mood, without emotions, man could be nothing but a biological computer. Love, joy, sorrow, fear, apprehension, anger, satisfaction and discontent produce the meaning of humor existence.

Depression is one of the most common and serious mental health problems that people face today. It is only a human experience of the feelings of sadness, gloominess, every now and then. A depressive disorder is an illness that involves the body, mood and thought. It affects the way the person eats and sleeps, the way one feel about oneself and the way one thinks about the things. Depression affects all age groups.

Depression is common in late life, affecting nearly 5 million of the 31 million Americans aged 65 and older. Both major and minor depression is reported in 13% of community were older dwell, 24% of older medical out patients, and 43% of nursing home dwelling older adults (Blazer, 2002).

Sridhar et al [2000] conducted a study on human life and the severity of depression in each stage of life. The study revealed that the elderly suffer from severe

depression. Not only disease and disability lead to depressed symptoms, but depressive symptom seems to be the precursor for the development of future disease.

Depression is a common cause of disability in the elderly. The consequences are reduced life satisfaction and quality, social deprivation, loneliness, increased use of health and home care services, cognitive decline, impairment in the activities of daily living, suicide and increased non suicide mortality (Khattari, 2005).

Human beings are specially gifted creatures from god. We can see many ups and downs in the life of man. When he is happy he shares it with the fellow beings through his facial expression, gestures and by his behavior towards others.

The medical profession considers happy humor to be safe. In any form of relaxation we have to have our conscious thought process but for laughing all our senses naturally and effortlessly combine in a movement hormone to give joy, peace and relaxation. One minute of laughter is equal to 10mts on the rowing machine. Humor is a perceptual process while laughter is a behavioral response. This behavior creates the predictable physiological changes within the body.

So to protect the old age, and to promote the health of the old age and to extend their life happiness, one of the strategies that can be followed is laughter and perceive the humor, which is a boon to mankind. The number of old age homes are increasing day by day and this is also considered as one of the reasons for elderly people, to develop depression. Many studies also proved that using humor as therapy can help to maintain equilibrium in bio psycho socio cultural aspects of senior citizens.

“Helping the individual to laugh purposeful, helps to have a happier life.”

Need for the study

Nowadays the elderly are left uncared by the family members and relatives and thrown in the old age home, where they suffer with depression because of grief. Aging is one of the developmental issues with social, economical and political impacts.

Old age is a crucial period where there are more vulnerable for depression. Physical and psychological trauma also leads to depression. Old age is said to be suffering from chronic diseases, psychological and physical stress serve as good example of low immune system. Stress has been shown to alter susceptibility to various diseases. Therapeutic use of relaxation responds to stress related disease, which has been represented as an important tool to be added to the therapeutic strategy, which serves as primary and secondary prevention in diseases.

The rapidly increasing growth of the elderly in developing countries possess a serious challenge to available mental health services. This growth in the elderly population inevitably leads to an increase in age related diseases, such as depression and serious constraints on the quality of life among elderly individuals.

The needs and the demands of the elderly population have been increasing as they have not been given much attention by the family members and relatives due to modernization, negligence, increasing nuclear family system and inadequate time to take care of them. Slurred speech, decreased interest in personal hygiene, social isolation, slumped posture and self destructive behavior are very commonly seen in elderly with depression. It is assumed that elderly have lots of physiological and

psychological changes, which make them feel stressed and thereby leading to depression.

Depression in the elderly is a significant public health problem. Since geriatric depression has important medical, social and financial consequences, investigation of depression in old age continues to evoke interest. Geriatric depression is under recognized, because of various factors. The risk factors that make elderly to become depressed are reduced immunity, physical function reduction, and chronic illness, death of their life partner and poor socio economic conditions.

Rosenblatt (2000) reports that the impact of depression absolutely reduces the daily function of anyone who suffers from it. The failure to recognize and treat depression in later life can lead to increased health care usage and cost, longer hospital stays, lack of compliance with treatment regimen and heightened morbidity and mortality associated with both medical illness and suicide.

Smiling, holding hands, laughing and dancing can be very happy, healthy activities. Comedy classes can help improve anyone's understanding of what is funny and what is not funny. Our sense of humor and ability to dance are NOT genetic traits – they are learned intellectual and physical habits and behaviors – the more we understand them, the more we do them, the healthier we will surely become.

Humor production improves our creative (problem solving) cognitive capacity, strengthens our memory, enhances social communication skills, and our ability to think on our feet. All of these vigorous mental activities, combined with the many benefits of a merry heart, help us to be happy.

It is evident that depression is an interplay of social, biological and psychosocial factors. There is paucity of research in the field of elderly population, particularly on intervention to reduce depression. Thus the researcher was motivated to plan for some interventions to reduce depression. Humor is a wonderful defense mechanism. It helps to diffuse anger and fear, serves as a distraction from stress, relaxes muscles, reduces blood pressure, increases the ventilation, and massages the internal organs. Humor is used for the relief of physical and emotional difficulties. Thus, the investigator is interested to do this study to reduce the depression level among the elderly population.

Statement of the problem

“An experimental study to assess the effectiveness of humor therapy upon depression among the elderly in selected old age homes, Chennai.”

Objectives of the study

1. To find out the prevalence of depression among the elderly in selected old age homes.
2. To assess the effectiveness of humor therapy upon the level of depression among the elderly.
3. To find out the association between the selected variables and the level of depression among the elderly in the experimental group before and after humor therapy.
4. To determine the level of satisfaction of humor therapy among the elderly in the experimental group.

Operational Definitions

Effectiveness

It refers to the extent to which humor therapy has reduced the level of depression in the elderly in terms of reduction of depression scores as measured by Geriatric Depression Scale.

Humor therapy

Humor therapy is one of the psychosocial interventions which is used for the relief of physical or emotional pain and stress. This therapy is generally used to improve quality of life, provide some pain relief, and encourage relaxation. It include portfolios, with funny books and photos, jokes, funny audio tapes and videos, comedy clips and cartoons, interesting news clips, articles, stories and reflections. It is 1hr show/day for a period of 4 days in a week for 2 weeks, which is designed and administered by the investigator for the elderly in selected old age home.

Depression

Depression is a state of mood in which the individual is sad, worried, loses interest in life, loses energy, hopelessness, and worthless, as measured by geriatric depression scale developed by Yesavage.

The elderly

It refers to the elderly aged 60 years and above residing at selected old age homes.

Old age home

It is the place where the elderly reside, being away from their home along with the other elderly, run by charitable trusts. In this study it is two Old Age Homes in Chennai, one in Kallikuppam used for the selection of participants for experimental group and other in Paraniputhur from where control group participants were selected.

Null Hypotheses

Ho1: There will be no significant difference in the level of depression in the elderly before and after humor therapy in the control and experimental group.

Ho2: There will be no association between the selected demographic and clinical variables and the level of depression before and after humor therapy in the control and experimental group.

Assumptions

Study assumes that

- Any life threatening illness produce stress, can lead to depression.
- The elderly suffer from depression due to loss of loved ones, job, change in life style etc.
- Humor therapy diminishes the level of cortisol.
- Humor therapy enhances coping ability for dealing with depression situation.
- Depression causes physiological and psychological problems in the individual.
- Nurses can promote psychological wellbeing by using alternative measures.

Delimitation

- The study was limited to 4 weeks.
- The study was limited to elderly who are residing in selected old age homes, Chennai.
- Humor therapy was given only to the elderly who had depression.
- The study was limited to the elderly who aged 60 and above.

Conceptual Framework of the Study

A conceptual framework is a group of concepts and a set of propositions that spell out the relationship between them. Their overall purpose is to make scientific findings meaningful and generalized.

A conceptual framework deals with the interrelated concepts on abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme. It is a device that helps to stimulate research and the extension of knowledge by providing both direction and impetus. A framework may serve as a spring board for scientific advancement. (Polit and Hungler 2007)

The present study aims at describing the effectiveness of humor therapy upon patients with stress. The conceptual framework was derived from Callisita Roy's adaption model (1991). Roy in her model focuses on the goal of nursing which is to facilitate adaptation of the individual for various stimuli from the environment. The Roy's adaptation model is adopted to explain the role of nurse in reducing depression. A person in an adaptive system and the need for adaptation is triggered by the various

stimuli. The stressful stimuli can be either physiological or psychological which is perceived by the individual as a stressor. The systems output is a response which may be adaptive or ineffective depending upon the intensity of the stimuli and the individual adaptation level.

The goal of nursing is to promote adaptation of the client using nursing interventions, so that the stimuli fall within – in the patient's adaptive range. The Roy's adaptation model provides a framework for this study. The psychological factors associated with depression threaten the activities of daily living. Humor therapy is the intervention that is expected to enhance the depressed people to cope up effectively thereby improving the quality of life. So I have taken this conceptual framework for this particular study. It is the abstract logical structure that enables the researcher to link the findings to nursing body of knowledge. It is developed from the existing theory and helps in identifying and defining concepts of interest and proposing relationship among them. The model gives the direction for planning, research design, data collection and interpretation of findings.

The core of Roy's adaptation model is the belief that a person's adaptive response is a function on the incoming stimulus and the adaptive level. The adaptive level is made up of the pooled effect of three classes of stimuli.

Roy further conceptualizes the person as having four modes of adaptation. They are physiological needs, self-concept, role function and independent relations. The conceptual framework explains the applications of Roy's adaptation in the care of depressed patient.

Focal stimuli

It is the stimulus which most immediately confronts the persons and the one to which the person must make an adaptive response. In this study the focal stimulus is the elderly depressed patient.

Contextual stimuli

It includes all the other stimuli that contribute to the behavior caused or precipitated by the focal stimuli. In this study the contextual stimuli are the medication and relaxation technique.

Residual stimuli

These are the factors that are relevant but cannot be validated as acceptance of the disease condition, body disturbance and regulator. Regulator is a subsystem coping mechanisms which responds through the process of perception and information processing, learning, judgment and emotions. For this present study, humor therapy is the regulator and cognator which acts as a coping mechanism for effectors.

Adaptive (Effectors)

Modes are the ways of coping manifest or cognator's activity (i.e) physiological, self concept, role function and interdependence. Adaptive responses are those that promote the integrity of the person's goal of survival growth and reproduction. In this study, the adaptive responses can be measured through effectiveness of humor therapy for elderly depressed at selected old age home's, Chennai.

Regulators

It is a major coping process involving the neural chemical and endocrine system.

Cognators

They are the major coping process involving four cognitives – emotive channels, perceptual and information processing, learning judgement and emotions.

Adaptive responses

Which promotes the integrity in terms of the goals of human systems

Self concept

It focuses specially on the psychological and spiritual aspects. It composite of beliefs and feeling about oneself at a given time and is formed from internal perception and perceptions from other reactions.

Role function

Set of expectations about how a person occupying one position behaves towards a person occupying another position. Focuses on the roles like primary, secondary and tertiary roles.

Interdependence role

It focuses on close relationship of people, individuals and collectively and their purposes, structure and development.

Physiological functions

It is associated with the physical and chemical process involved in the function and the activities of living organisms.

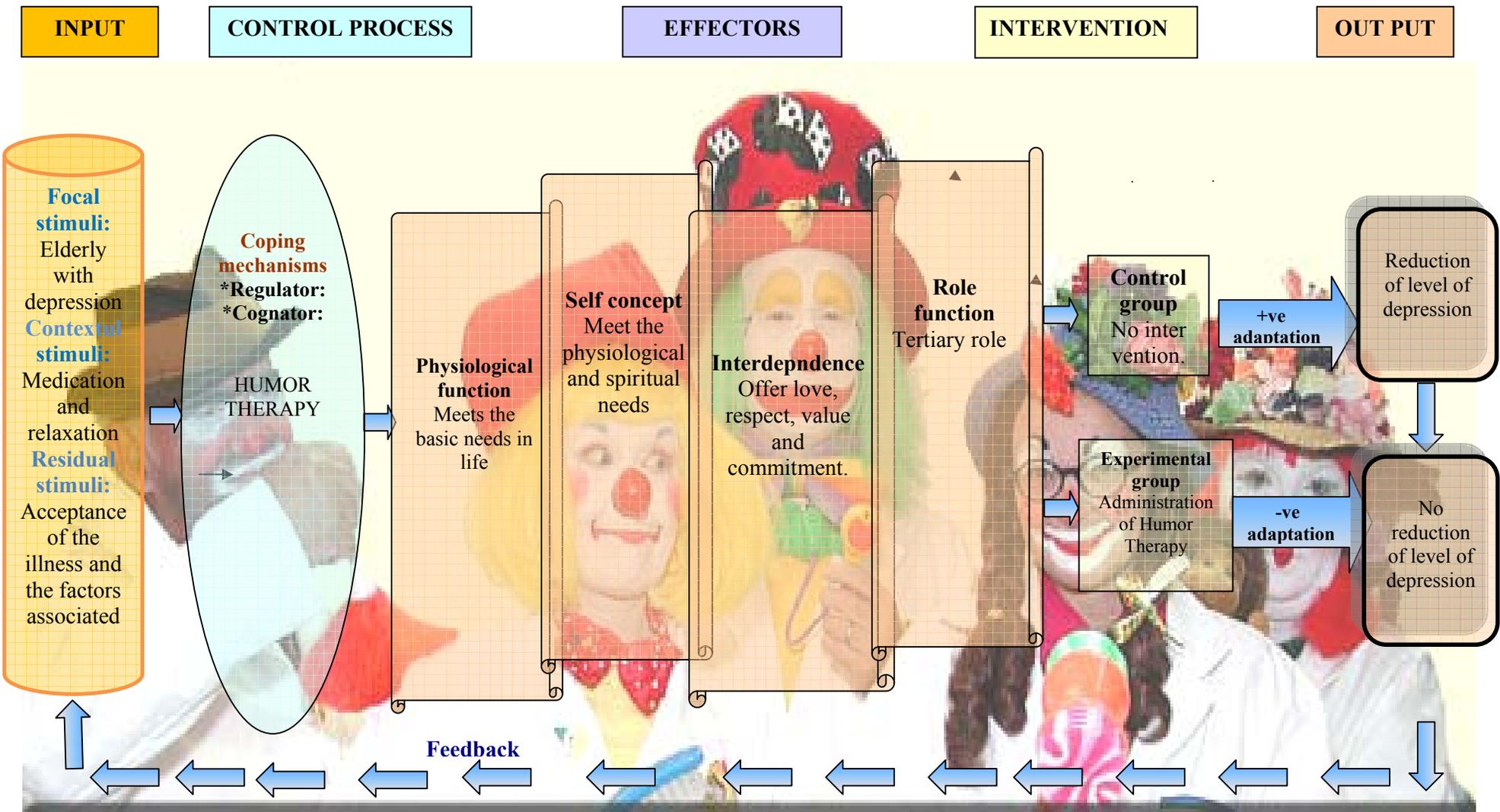


Fig. 1 Conceptual Framework Based on Roy's Adaptation Model (1970)

Projected outcome

The projected outcome of the study will be the reduction in the level of depression among the elderly after administration of humor therapy in the experimental group.

Summary

This chapter has dealt with the back ground of the study , need for the study, statement of the problem, objectives of the study, assumptions, operational definitions, null hypotheses, inclusion and exclusion criteria, delimitation and conceptual frame work of the study.

Organization of the report

Further aspects of the study are presented in the following five chapters.

Chapter- II : Review of literature

Chapter- III : Research methodology which includes research approach, research design, research setting, population, sampling, sampling criteria and development of analysis and research instrument.

Chapter-IV : Analysis and interpretation of data is presented in terms of descriptive and inferential statistics.

Chapter- V : Discussion.

Chapter –VI: Summary, Conclusion, Implications and Recommendations are presented.

CHAPTER - II

REVIEW OF LITERATURE

A literature review involves the systematic identification, location, scrutiny, and summary of written materials that contain information on the research problem (Polit and Hungler2007).

Review of literature

“Conducting a literature review is a little bit like doing a full–fledged study”. The review of literature has two major goals: (1) To provide readers with an overview of existing evidence on the problem being addressed and (2) To develop an argument that demonstrates the need for the new study. According to nursing research by Polit (2008), ‘Review of literature is a written summary of the state of evidence on a research problem’.

Review of literature for this study focuses on

- Literature related to prevalence of depression
- Literature related to geriatric depression
- Literature related to humor therapy
- Literature related to humor therapy upon geriatric depression

Literature related to prevalence of depression

Depression is an illness that affects both the mind and the body and is a leading cause of disability, workplace absenteeism, decreased productivity and high suicide rates. Depression is the most common psychiatric disorder in general practice and about

one in ten patients seen in the primary care settings suffer from some form of depression. In a study by the World Health Organization (WHO) conducted at 14 sites, the most common diagnosis in primary care was depression (Goldberg 2000).

A cross-sectional study was conducted by Barua in 2003 among 627 elderly individuals of 60 years and above in the rural area of Udupi taluk. In this study, the prevalence of depression among the elderly population was determined to be 21.7%. The prevalence in the age group of 80 years and above and those individuals who had a history of death in the family within the last six months were found to be 34.4% and 52.4% respectively. Multiple logistic regression analysis revealed that these two correlates were independently associated with depressive disorders in elderly population.

Depression is estimated to affect 340 million people globally. The prevalence of psychiatric disorders is reported to differ between countries and within countries, across various ethnicities. The World Mental Health Survey Initiative carried out cross-national research in mental health, especially in developing countries. The prevalence of depression in a population based study conducted in urban Pakistan was 45.9%, while in rural Bangladesh, it was reported to be 29% and in a peri-urban clinic based study in Uganda, it was reported to be 6.1% (The WHO World Mental Health Consortium 2004.)

It was stated by Sherina in 2005, that the Prevalence of depression among the elderly in this study was 6.3%, and was significantly associated with gender, ethnicity, chronic illness, functional disability and cognitive impairment. Based on this study's

findings, health care personnel can be educated to look out for depression among elderly who are females and who suffer from chronic illness, functional disability and cognitive impairment.

Literature related to geriatric depression

The elderly grieves over what has happened and what cannot be. People above the age of 70 experience depression more.

Geriatric depression is a common but frequently unrecognized or inadequately treated condition in the elderly population. Manifestations of elderly depression in elderly persons may hinder early deduction, anxiety, somatic complaints, cognitive impairment and concurrent medical and neurological disorders which are more frequent. Like major depression, minor depression, which is often ignored, produces morbidity for elderly persons. Both major and minor depression is associated with high mortality rates if left untreated. The author reviews the important aspects of geriatric depression for the no psychiatric clinician. The etiology of depressive conditions in the elderly population, the unique clinical feature of depression in older people, important evaluation considerations is popular with much medical and pharmacological treatment options for managing depression in the geriatric population. Lapid Rumanans (2003) in an article have stated above.

Jaunt et al (1999) conducted a study on life experience of the elderly. 200 participants were included in the study, which analyzed the experience felt by the participants verbalized, that their life had been miserable and they always felt depressed.

A longitudinal cohort study conducted by Barruk et al (1999) examined the cognitive decline predisposing to development of depression in elderly. This study investigated the relationship of cognitive decline which showed a marked increase in the level of depression among the elderly.

According to Kapp (2002) older individuals with depression of varying degrees of severity and other chronic as well as acute medical problems are being more prevalent as the population ages dramatically. The care of these individuals rises plethora of legal and ethical issues , as professional care givers, advocates, and society endeavor to balance compassion and benevolence for suffering persons, on one hand, with respect for the autonomous right to control vital facets of one's own life, on the other. We must continue to grapple, from legal, ethical, and practical perspectives, with complex questions about when, how, and with whom we ought to be using the tools in our modern scientific armamentarium to intervene against the wishes of older persons who purport to choose to be miserable and to act accordingly.

In a study conducted by Sokoya, (2003), he determined the rate of geriatric depression among 202 older people in a teaching hospital in Nigeria, using geriatric depression scale. The rate of depression in primary care was found to be 7.4% and severe depression was only 1.5%. Very low income and subjective report of poor health was significantly associated with depression.

In the year 2000 Harred et al studied the association of hormones on the affect in the elderly. 180 elderly were selected for the study. Blood was taken from the participants and was sent for analysis. They explored that 90% of the elderly had

decreased serum cortisol level, dopamine level, which lead to the development of depression.

Yet another person Arthur, (2002) reported that the cause for depression in later life are not limited to cognitive factor alone but also associated with wide range of psychosocial stress and negative events. Depression absolutely reduces the function of anyone. It can also have a distinctly deleterious impact and morality. Depression contributes significantly to health care cost, and depression in patient have been found to have more primary care visits per year and increased length of stay in hospital. Functional impairment caused by chronic illness like the ability to shop, cook, clean, and travel, difficulty in dressing, grooming, bathing and feeding oneself. But physical illness and depression are associated with restricted activity that results in depression in normal role functioning.

Depression is a significant problem among older adults, which is most commonly reported in the primary cares setting. To offer the treatment for depression preferred by many older adults, clinical providers and researchers have called for the creation of integrative psychosocial care options in primary care, using mental health providers working in collaboration with medical providers. In their article, they examined the empirical status of integrating treatment for depression for older adults in the primary care setting by summarizing the current models of integrated care and latest research developments. The authors have discussed the strengths and limitations of the current integration models and offer recommendations for expanding work in this important area (Skultely, Rodriguez 2008).

Literature related to humor therapy

The role of humor in medicine is becoming increasingly apparent. Humor helps individuals to narrow interpersonal and cultural gaps, communicate difficult messages, express frustration and anger, and cope with anxiety. Primary care providers need to be able to interpret humor used by patients and can learn to use humor to create a healing environment. This article reviews the roles played by humor in the doctor-patient relationship and provides a brief guide to using one's sense of humor to improve and enrich patient care. (Journal of Neuropsychiatry 2006)

The positive psychology movement has created more interest in examining the potential value of experiencing positive emotions (e.g., humor, and happiness) during the course of bereavement. This study of 292 recently widowed, men (39%) and women (61%) aged 50 were over examined both the perceived importance of and the actual experience of having positive emotions in their daily lives and how they might impact bereavement adjustments. They found that most of the bereaved spouses rated humor and happiness as being very important in their daily lives and that they were also experiencing these emotions at higher levels than expected. Experiencing humor, laughter, and happiness was strongly associated with favorable bereavement adjustments (lower grief and depression) regardless of the extent to which the bereaved person valued having these positive emotions (Lund 2008).

In the year 2000 Powell studied humor and laughter on clinical outcomes of diseases. It had been proved that the laughter improves immunity & reduces the attack of asthma by decreasing physiological stress response and he identified multiple

psychosocial effects such as reduction in stress, anxiety, and improvement in mood, self esteem and coping skill.

Bourdevu (2004) designed a study to explore the study of laughter and humor with regard to emotions. 34 patients were involved in the therapy which revealed that patients who underwent laughter and humor therapy were able to maintain a balanced emotional status.

A study conducted by Moore (2000) to determine the effects of therapeutic humor for patients with grief related stress. Patients who underwent the humor therapy were able to come out of grief successfully within two months and were relieved from the symptoms of stress.

There is now a relatively good understanding of the broad range of direct and indirect effects of humor and laughter on perceptions, attitudes, judgments and emotions, which can potentially benefit the physical and psychological state.

Humor in this frame of reference could be used as an adjunct to conventional treatment with the goal of helping clients cope with symptoms, improving rehabilitation through its emotional, cognitive, social and physiological impact as well as reinforcing and facilitating therapy and client empowerment.

It was stated by Shannohoff in 2005, that oxidative stress contributes to decrease in relaxation. Sixty nine cancer patients participated and were assessed with perceived stress scale. There was significant reduction in perceived stress scale and increase in relaxation after humor therapy.

A descriptive cross sectional survey on the use of complementary therapies were calculated for 36 individual therapies listed on the survey of stress reducing techniques including humor therapy. Among stress reducing techniques 64% of all participants reported regular practice of humor therapy. It can be more helpful to relieve patient symptoms related to treatment and stress (Bennett 2002).

Carbo (2006) has shown that human aging has a mind body connection that we enjoy with the benefits of laughter. Humor, priceless humor, and our response to it can have many unexpected health benefits. He described the use of humor as a nursing intervention and the integration of the use of humor into the repertoire of nursing interventions.

A comparative study by Artisol (2002) between humor therapy group and distraction group in controlling stress and outcome was self reported on decreased stress, mirthful laughter and immune function. Stress decreased for subjects in humor group compared with those of distraction group.

Humor holds an important and almost omni-present place in human communication. Research and reflection on humor have tried to define the scope of its causes, its effects, its mechanisms of action and production, its purposes and its uses. This study aims at drawing up a general description of scientific studies dealing with humor carried out in the context of the nurse-patient communication from the fixed theory of Strauss and Corbin (2001) to derive the characteristics, conditions of use and consequences as much in the patient's as a the nurse's. The results obtained prove that humor in care is contextual, situational and spontaneous. There are conditions of use of

humor which are connected with the nurse, with the patient, with their relation and with the situation. (Patenaude, article in French).

A correlation study with the mirthful humor and post intervention stress measures by Galen in 2004 showed that the patients included in the humor therapy showed increased immune functioning and improved natural killer cell activity.

Literature related to humor therapy on depression

Hirch (2008) conducted a study on Positive effects of humor on older patients with depressive symptoms. They investigated the effects of a standardized humor therapy group in a clinical context especially for older depressed patients. For this purpose, an experimental group with treatment (52 patients participating in the humor group) was compared to a control group with no specific treatment (38 patients); all 90 participants had clinical depressive symptoms according to ICD-10 classification. Questionnaires (among them GDS, SF-12, State-Trait Cheerfulness Inventory, and Satisfaction with Life Scale) were administered at two time points (pre- and post-treatment). From pre- to post-measurement, significant improvements could be shown only in the experimental group for resilience and satisfaction with life ($p < 0.05$). Analyses of the subgroups with at least medium to severe depression showed further significant effects for cheerfulness, seriousness, bad mood, and satisfaction with life ($p < 0.05$). These severely affected patients seemed to profit the best from humor therapy. The results indicated the efficacy of this specific therapeutic intervention.

The study examined the associations among coping humor, other personal/social factors and the health status of community-dwelling older adults. Survey

questionnaires were completed with 73 community-dwelling older adults. Included were measured of coping humor, spirituality, self-efficacy, social support and physical and mental health status. Correlations across all variables showed coping humor to be significantly associated with social support, self-efficacy, depression and anxiety. Forward stepwise regression analyses showed that coping humor and self-efficacy contributed to outcome variance in the measures of mental health status. Coping humor as a mechanism for managing the inevitable health stresses of aging has received less attention. Correlations among coping humor, self efficacy and social support suggested that a sense of humor may play an important role in reinforcing self-efficacious approaches to the management of health issues (Marziali E 2010).

In the year 2006 Ebener conducted a study on the relationships between humor coping, health status, and life satisfaction among older residents of assisted living facilities. A structural equation model with latent variables was specified for the three variables. Health status was expected to directly affect humor coping and life satisfaction with the Multidimensional Functional Assessment Questionnaire, Coping Humor Scale, and Life Satisfaction Index A. The relationships between health status and humor coping and health status and life satisfaction were statistically significant. Humor as a coping strategy seems to be available to older adults who are in better health.

Aging can be associated with physical, cognitive and/or social loss. Older people, however, cope well with this loss, perhaps by using humor. In older people there is a correlation between humor on the one hand and well-being and morale on the other. The use of humor by the elderly has a favorable influence on their health. In health care

for older people humor is sometimes used as a therapy. Scientific evidence of positive effects of humor on mental health was found. It is perhaps better for caretakers to show appreciation for the humor of older people than to make jokes about older people oneself (Article in Dutch).

Kurse (2006) Laughter, the physical response to perceived humor, has demonstrated positive effects on physical and psychological well-being. The purpose of this descriptive study was to explore the humor stimulus in a population of older adults. One hundred thirty (130) hospitals auxiliary personnel aged 50 and older were asked the question what makes you laugh? The largest category of people represented telling jokes (30%) and situations or events (51%). Humor can be used by nurses as an effective therapeutic tool when caring for older adults if appropriate sources of humor are identified and applied.

Hence from the above literatures, it is understood that the humor therapy has many therapeutic advantages in the field of nursing and it can be implemented as a routine intervention in the care of patients.

Summary

This chapter has dealt with the review of literature related to the problem stated. The literatures presented here were extracted from 9 primary and 14 secondary sources. It has helped the researcher to understand the impact of the problem under study. It has enabled the investigator to design the study, develop the tool, plan the data collection procedure, and to analyze the data.

CHAPTER - III

RESEARCH METHODOLOGY

The methodology of the research study is defined as the way, the data was gathered and analyzed in order to answer the research questions or analyze the research problem. The research methodology involves a systematic procedure by which the researcher starts from initial identification of the problem to its conclusion.

This chapter deals with a brief description of different steps undertaken by the investigator for the study. It includes research approach, research design, the setting, population, the sample and sampling technique, development and description of tool, content validity, reliability, pilot study, procedure for data collection and plan for data analysis.

Research approach

Research approach is the most significant part of any research. According to Polit and Beck (2008) experimental research is an extremely applied form of research and involves in finding out how well a programme, product, practice or policy is working. Its goal is to assess or evaluate the success of the same.

Present study is conducted in two phases.

Phase I: Survey approach is applied to assess the prevalence of Depression among the elderly.

Phase II: Experimental Approach is applied to assess or evaluate the effectiveness of humor therapy on reduction of depression.

An experimental research is generally applied where the primary objective is to determine the extent to which a given procedure meets the desired result. In this study the investigator wanted to assess the depression among elderly people before and after administration of “Humor Therapy”. The experimental approach seemed to be the most appropriate approach.

Research design

A research design incorporates the most important methodology design that a researcher work in conducting a research study (Polit and Beck 2004). An Experimental research design, Pre test and post test design was adopted for conducting this study.

The research design consisted of two phases

Phase I: Descriptive research design was conducted to assess the prevalence of Depression among the elderly using Geriatric Depression Scale, in 2 old age homes.

Phase II: True experimental research design was used to assess the effectiveness of Humor Therapy.

The research design is represented diagrammatically as follows:

R O₁ X O₂

R O₃ _ O₄

R - Randomization of setting through simple random sampling.

O₁ - Pretest (Experimental group)

X - Humor therapy

O₂. Post test (Experimental group)

O₃- Pretest (Control group), O₄ – Post test (Control group)

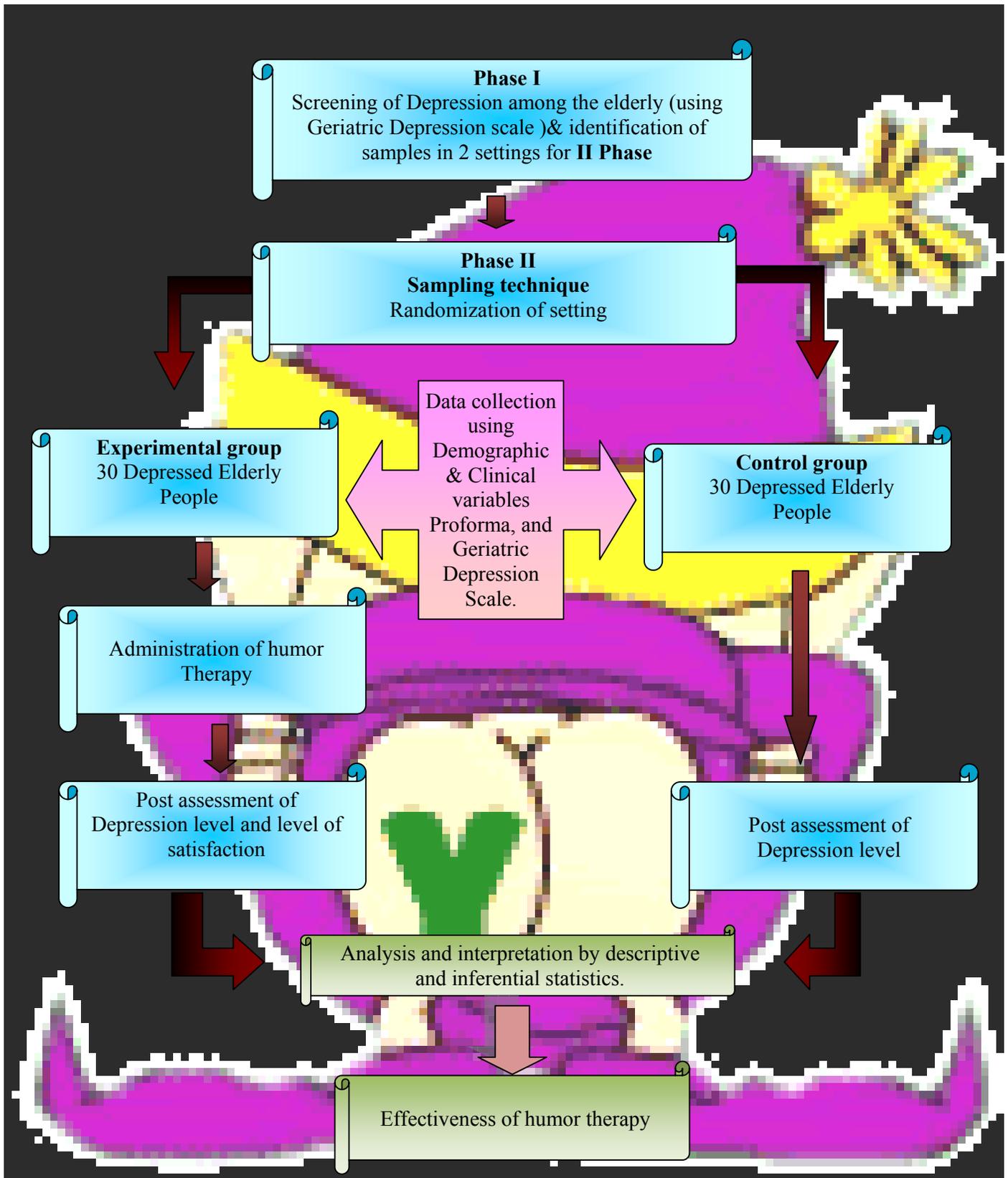


Fig. 2 Schematic representation of research design

Research setting

According to Polit and Beck (2008) setting is the physical location and condition in which data collection takes place in a study. The study was conducted in two old age homes, Anandam Home for senior citizens at Kallikuppam (Experimental Group) and little drops home for the aged at Paraniyuthur, Chennai (Control Group). Anandam Home at Kallikuppam, Chennai is located about 20km from Chennai Central railway station, 10kms from the main bus stand and about 20kms from Apollo College of Nursing. The old age home has 54 inmates and has good infrastructure. Each occupancy room has got a cot, table, and chair and almirah with attached bathroom and toilet facility. The home is managed by a trust through donations from the well wishers. Here the elderly are admitted based on their request and need and the services are provided free of cost. The settings were chosen because of feasibility in terms of availability of adequate subjects and cooperation of the management trust of the old age homes.

Population

Polit and Beck (2004) stated that a population in an aggregate totality of all the subjects that possess a set of specifications.

Phase I:

The target population is the group of population that the researcher aims to study and to whom the study findings will be generalized. In this study, the target population is elderly people in old age home.

Accessible population is the list of population that the researcher finds in the study area. The accessible population in this study was the elderly who are residing in

selected old age homes, Chennai. (Anandam Home for senior citizens at Kallikuppam and Little Drops Home for the aged at Paraniputhur, Chennai)

Phase II:

The target population was the elderly with depression in old age homes.

Accessible population in this study was the elderly with depression who are residing at selected old age homes, Chennai. Anandam Home for senior citizens at Kallikuppam (Experimental Group) and Little Drops Home for the aged at Paraniputhur, Chennai (Control Group).

Sample

Polit and Beck (2004) said that the sample consist of a subset of the units that comprise the population.

Phase I:

Elderly people residing in selected old age homes, meeting the inclusion criteria.

Phase II:

Elderly people with depression residing in selected old age homes, meeting the inclusion criteria.

A sample of 30 elderly people with depression in experimental group was selected from an old age home and 30 elderly people with depression in control group were selected from another old age home.

Sampling Technique

Sampling is the process of selecting a portion of population to represent the entire population (Polit and Beck, 2006).

Phase I:

Purposive sampling technique was used to select the settings and samples from the respective settings.

Phase II:

True experimental design was adopted and selected settings were assigned to the experimental and control group through randomization.

Sampling Criteria

Phase I:

Inclusion criteria

- Elderly people aged 60 years and above.
- Elderly people who can speak and understand Tamil or English.
- Elderly people who are willing to participate in the study.

Exclusion criteria

- Elderly people with sensory deficits like complete blindness, total hearing loss, severe cognitive impairment and dementia were excluded.
- Elderly people who were very sick and unable to communicate.

Phase II:

Inclusion criteria

- Elderly people with depression score >11 as per the geriatric depression scale.

Exclusion criteria

- Elderly people who are not willing to participate in the study.

Selection and development of study instruments

As the study aimed to evaluate the effectiveness of humor therapy upon depression, the data collection instruments were developed and chosen through an extensive review of literature in consultation with experts and with the opinion of faculty members. The instruments used in this study were Demographic variable proforma, Clinical variables proforma, Geriatric Depression Scale, and Rating Scale on the level of satisfaction on humor therapy.

Demographic variable proforma

Demographic variable proforma consists of age, gender, educational status, marital status, source of income, monthly income, number of children, religion, type of family and duration of stay in the old age home.

Clinical variables proforma

This was used to assess the clinical variables such as history of any medical illness, duration of medical illness, history of taking medications, history of

hospitalization, treatment seeking behavior, history of smoking, and history of alcoholism, physical activity and relaxation therapy used.

Geriatric depression scale

Yesavage's Geriatric Depression Scale (GDS) consisting of 30 items related to geriatric depression with 'yes' or 'no' options was used for the study to collect the data. Scoring was based on the responses of the client. Each depressive answer count one. Positive and negative items were scored based on the framing of questions. If Q 1, 5,7,9,15,19,21,27,29 and 30 has "No" responses scored as one for each and for the rest if responses were 'Yes' scored as one and then the total scores were obtained. Thus the total obtainable score is 0-30. Obtained score is interpreted as follows:

Normal 0-10,

Mild depression 11-17,

Severe depression >17.

Rating scale to assess the level of satisfaction on humor therapy

This scale was developed by the researcher based on the objectives of this study. This scale consisted of 10 items on satisfaction of the clients regarding various aspects of humor therapy, rated on a four point scale with the score – Highly satisfied-3, Satisfied-2, Dissatisfied-1 and highly dissatisfied-0. The scale was used to assess the explanation given about the humor therapy, the researcher's approach to the clients, time, duration, understandability and usefulness, involvement of the participants, and the arrangements made during the programme. Thus the total obtainable score is 0-30. The obtained score is converted into percentage and is interpreted as follows,

Highly satisfied	76-100%
Satisfied	51-75%
Dissatisfied	25- 50%
Highly dissatisfied	Below 25%

Validity

Content validity is the degree to which an instrument measures what it is supposed to measure. Content validity is the sampling adequacy of the content being measured (Polit and Hungler 2007).

The content validity of the tool was obtained by getting opinion from several experts. The experts have suggested some specific modifications in the demographic and clinical variables proforma and rating scale. The modifications and suggestions of experts were incorporated in the final preparation of the tool. GDS is a standardized and valid tool developed by Yesavage and was used in many studies including India (Rajeshwari (2010), Hirsch et al (2008)).

Reliability

Reliability is the degree of consistency with which an instrument measures the attribute which is designed to measure (Polit & Hungler 2007). Original version of GDS has internal consistency (alpha 0.94), split half reliability (0.94) and test retest correlation of 0.85 over a week. The reliability of translated version in Tamil is established by split half method and the reliability score was (0.83).

Pilot Study

Polit and Beck (2004) states that a pilot study is a miniature of some parts of actual study in which the instruments are administered to the subjects drawn from the same population.

It is a small scale version or trail run done in preparation for the major study. The purpose is to find out the feasibility and practicability of the study design. The pilot study was conducted on 10 elderly people with depression. The subjects were chosen by simple random sampling, 5 in the control group and 5 in the experimental group. Level of depression was assessed for both the control and experimental group. Humor therapy was given for 1 hour for 10 days for the experimental group. There was no intervention for the control group. Depression scores were assessed for both the control and experimental group after one week. Then the level of satisfaction on humor therapy was assessed using the rating scale for experimental group. On the whole humor therapy was found to be feasible and acceptable.

Intervention protocol

Humor therapy is one of the psychosocial interventions which is used for the relief of physical or emotional pain and stress. This therapy is generally used to improve quality of life, provide some pain relief, and encourage relaxation. It refers to the planned content and activities which include portfolios, with funny books and photos, jokes, funny audio tapes and videos, comedy clips and cartoons, and funny and interesting news clips, articles, stories and reflections. It is 1hr show/day for a period of

4 days in a week for 2 weeks, which is designed and administered by the investigator for the elderly in selected old age home.

Data collection procedure

The data collection is the gathering of information needed to address a research problem. The data collection was carried out for a period of one month. Permission was obtained from the Principal, Head of the Department of Psychiatric Nursing, Apollo College of Nursing and the secretary of the old age homes to conduct study, in Anandam Old Age Home for Senior Citizen, Kallikuppam and Little Drops Old Age Home, Paraniputhur.

After initial introduction the researcher obtained consent from the subjects to participate in the study. An assurance was given regarding confidentiality before the data collection procedure. GDS was administered to all the inmates and the prevalence rate was found. By simple random sampling technique, 30 elderly people in each setting who had depression (GDS score > 11) were selected by the researcher for data collection. Then the settings were randomized and allotted to the control and experimental group.

The data collection was done for a period of 4 weeks on selected sample. The therapy is divided into different sessions. The participants in the experimental group were divided into 2 groups of 15 each and the intervention was administered. Schedule was made for each week. It included portfolios (My Happy folder- humorous things happened in the elderly's life), Humor with funny books and photos, jokes, funny audio tapes and videos, comedy clips and cartoons, interesting news clips, articles, stories and

reflections. It is 1hr show/day for a period of 4 days in a week for 2 weeks. At the end of 4 weeks the depression score was assessed by Geriatric Depression Scale both in the control and experimental group. Then level of satisfaction regarding administration of Humor Therapy was assessed using level of satisfaction Rating Scale in the experimental group.

Plan for data analysis

Data analysis is the systematic organization and synthesis of research data and testing of null hypotheses by using the obtained data (Polit & Beck, 2004). Analysis and interpretation of data were carried out with descriptive and inferential statistics.

Descriptive statistics such as frequency, percentage, mean and standard deviation were used to describe the demographic variables, clinical variables and the level of depression. Inferential statistics such as paired t-test, and independent ‘t’ test (to analyze the difference in Depression score before and after Humor Therapy and to assess the effectiveness of humor therapy on depression) and chi square (to analyze the association between the level of depression and selected variables of clients with depression) were used.

Summary

This chapter has dealt with the selection of research approach, research design, setting, population, sample, sampling technique, sampling criteria, selection and development of study instruments, validity and reliability of study instrument, pilot study, data collection procedure and plan for data analysis. The following chapter deals with analysis and interpretation of data using descriptive and inferential statistics.

CHAPTER - IV

ANALYSIS AND INTERPRETATION

The analysis is defined as the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of the results and of examining the simplification of the findings with in a broader context. (Polit and Hungler 2007).

This chapter deals with the analysis and interpretation including both descriptive and inferential statistics. Statistics is the field of study concerned with techniques or methods of collection of data, classification, summarizing, interpretation, drawing inferences, testing of hypothesis, making recommendations, etc., (Mahajan, 2004).

The data was analyzed according to the objectives and hypothesis of the study. Analysis of the study was compiled after all the data was transferred to the master coding sheet. The data were analyzed, tabulated and interpreted using appropriate descriptive and inferential statistics.

Organization of the findings

The findings of the study was organized and presented under the following headings.

- Prevalence of depression among the elderly.
- Frequency and percentage distribution of Demographic variables.
- Frequency and percentage distribution of Clinical variables.
- Frequency and percentage distribution of level of depression before and after humor therapy.

- Comparison of mean and standard deviation of the level of depression in the control and experimental group before and after humor therapy among the elderly.
- Comparison of mean and standard deviation of level of depression before and after humor therapy in experimental and control group of the elderly.
- Frequency and percentage distribution of level of satisfaction on humor therapy in the experimental group of the elderly.
- Association between selected demographic variables and the level of depression before and after humor therapy in control group of the elderly.
- Association between selected demographic variables and the level of depression before and after humor therapy in experimental group of the elderly.
- Association between selected clinical variables and the level of depression before and after humor therapy in control group of the elderly.
- Association between selected clinical variables and the level of depression before and after humor therapy in experimental group of the elderly.
- Item wise frequency and percentage distribution of the level of satisfaction regarding humor therapy among the elderly.

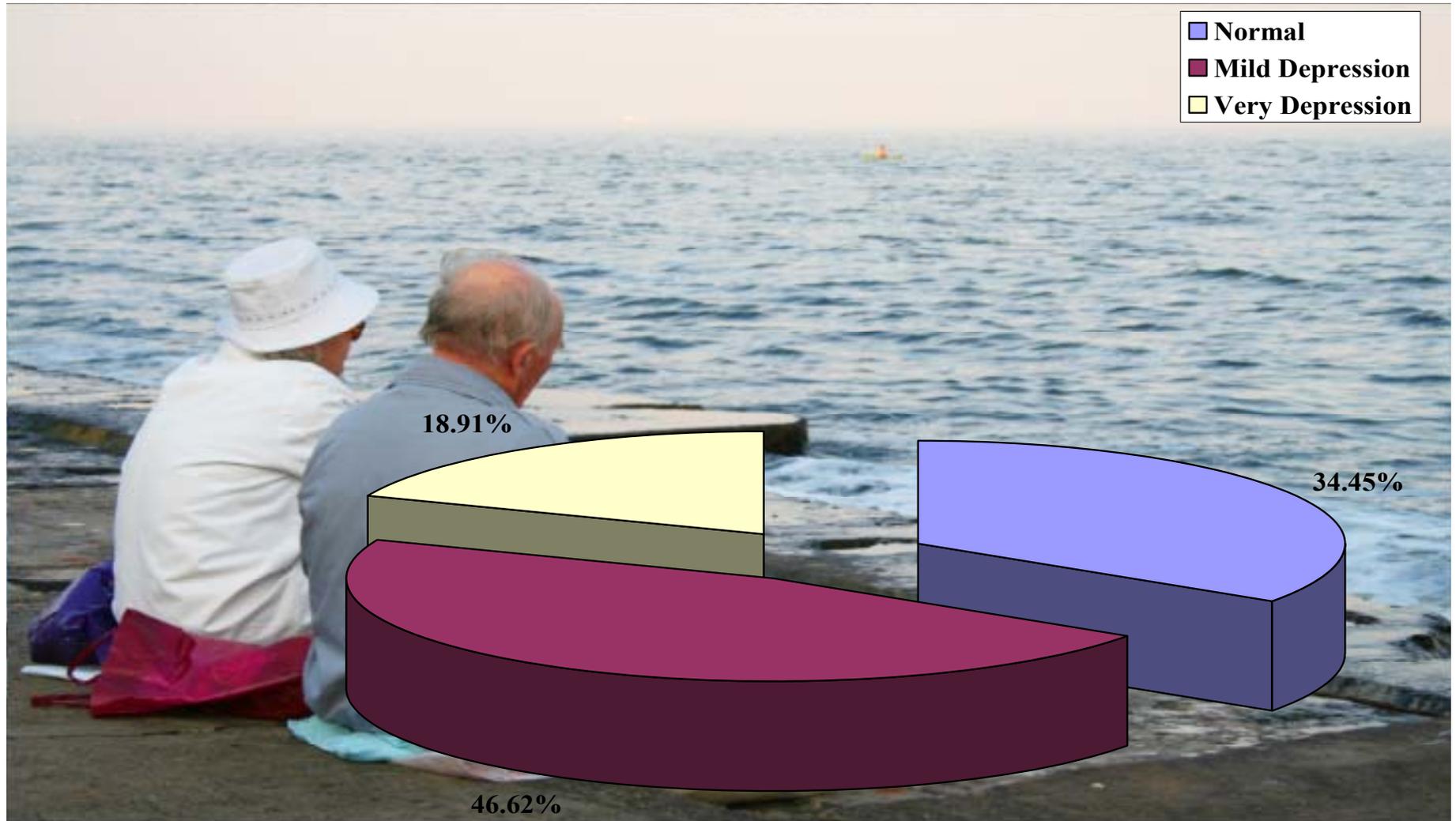


Fig.3 Percentage distribution of prevalence of depression.

Table 1

Frequency and percentage distribution of demographic variables in the control and experimental group among the elderly with depression.

(N=60)

Demographic variables	Control group n=30		Experimental group n=30	
	n	p	N	p
Gender				
Male	10	33.3	8	26.6
Female	20	66.6	22	73.3
Educational status				
Illiterate	16	53.3	15	50
Primary education	5	16.6	4	13.3
Secondary education	4	13.3	7	23.3
Higher secondary	2	6.66	2	6.66
Graduate and above	3	10	2	6.66
Religion				
Hindu	4	13.3	30	13.3
Christian	-	-	-	-
Muslim	26	86.6	-	-
Others	-	-	-	-
Status of spouse residing in this home				
Yes	5	16.66	3	10
No	25	83.33	27	90
Source of income				
Pensioners	-	-	-	-
Support from others	-	-	-	-
Savings	-	-	-	-
Properties	-	-	-	-
Others (specify);	-	-	-	-
Nil	30	100	30	100

Monthly income				
≤2000	-	-	-	-
2001 -6000	-	-	-	-
6001 -10,000	-	-	-	-
≥10,000	-	-	-	-
Nil	30	100	30	100
Number of children				
No children	22	73.3	29	96.6
One	4	13.3	1	3.33
Two	2	6.6	-	-
More than two	2	6.6	-	-
Type of family(before joining the old age home)				
Nuclear	18	60	16	53.3
Joint	12	40	14	46.6

The data in the table 1 revealed most of the elderly were females (66.6%, 73.3%), Majority of them were Christians and Hindus (86.6%,100%), had no spouse residing in the same old age home (83.33%, 90%) and almost all of them had no source of income in the control and experimental group.

Fig .3 indicated that the prevalence of depression among the elderly residing in the old age home were mild depression (46.62%) and very depressed (18.91%) and overall as (65.53%).

Fig.4 that a most of the elderly were between 60-65 years of age (36.6%, 46.66%), married (56.6%, 53.3%), from nuclear family (60%, 53.3%), illiterate (53.33%, 50%)

Fig.5 depicted that most of the elderly had no children (73.3%, 96.6%) in the control and experimental group.

Fig.6 showed that most of the elderly had the duration of stay < 1 year in the old age home (70%, 56.6%) in the control and experimental group.

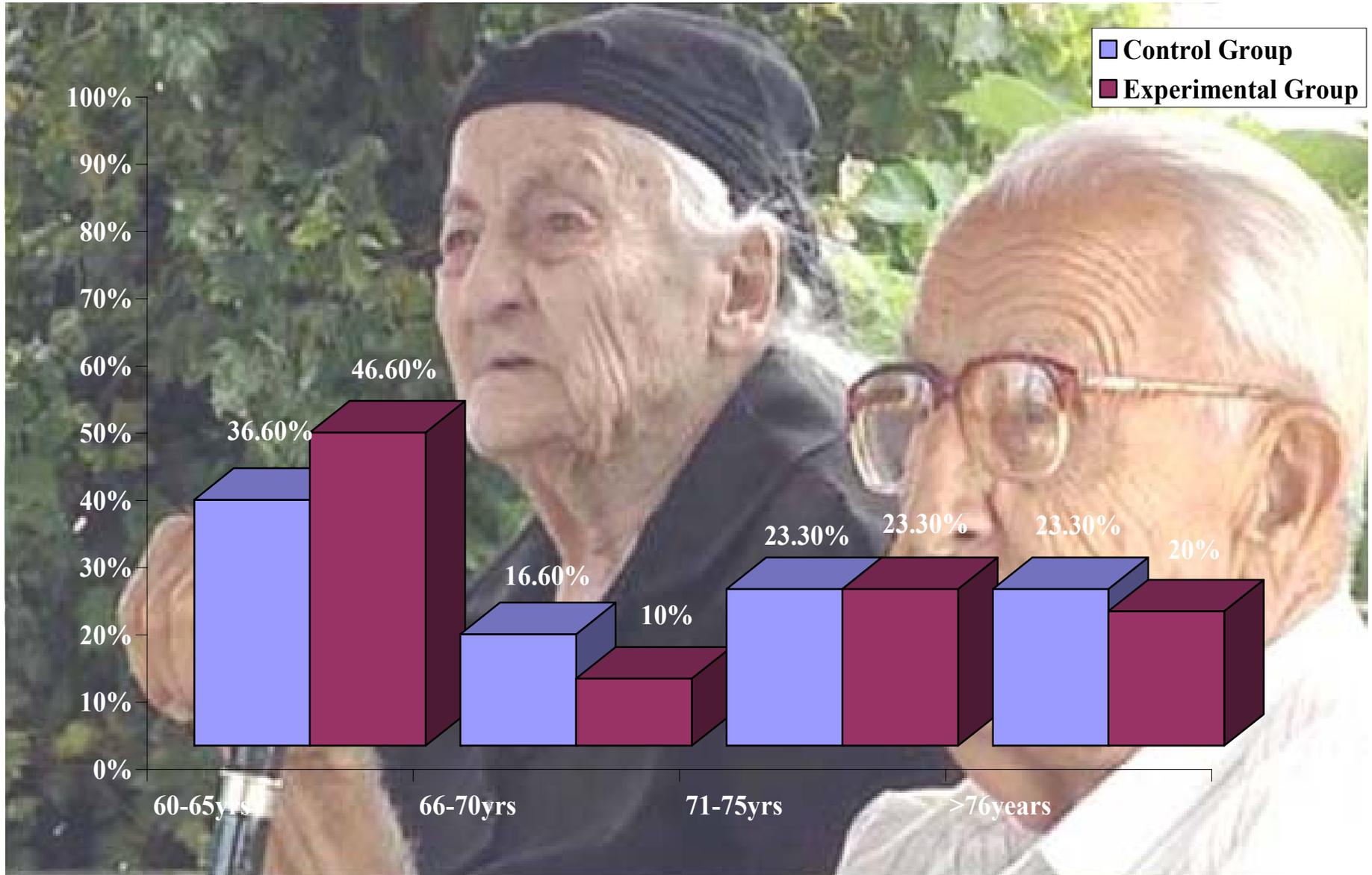


Fig.4 Percentage distribution of age in years among the elderly.

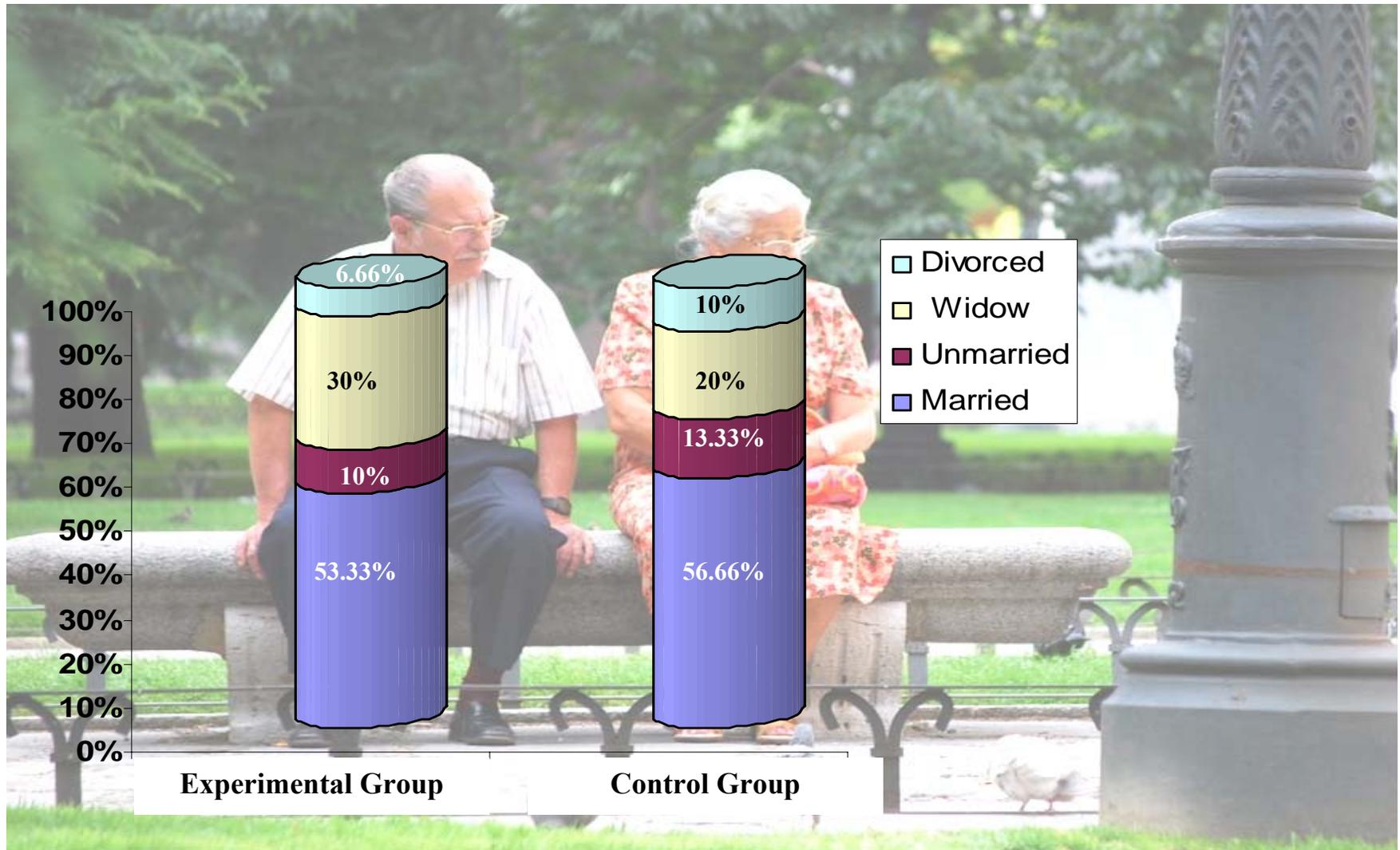


Fig.5 Percentage distribution of marital status among the elderly

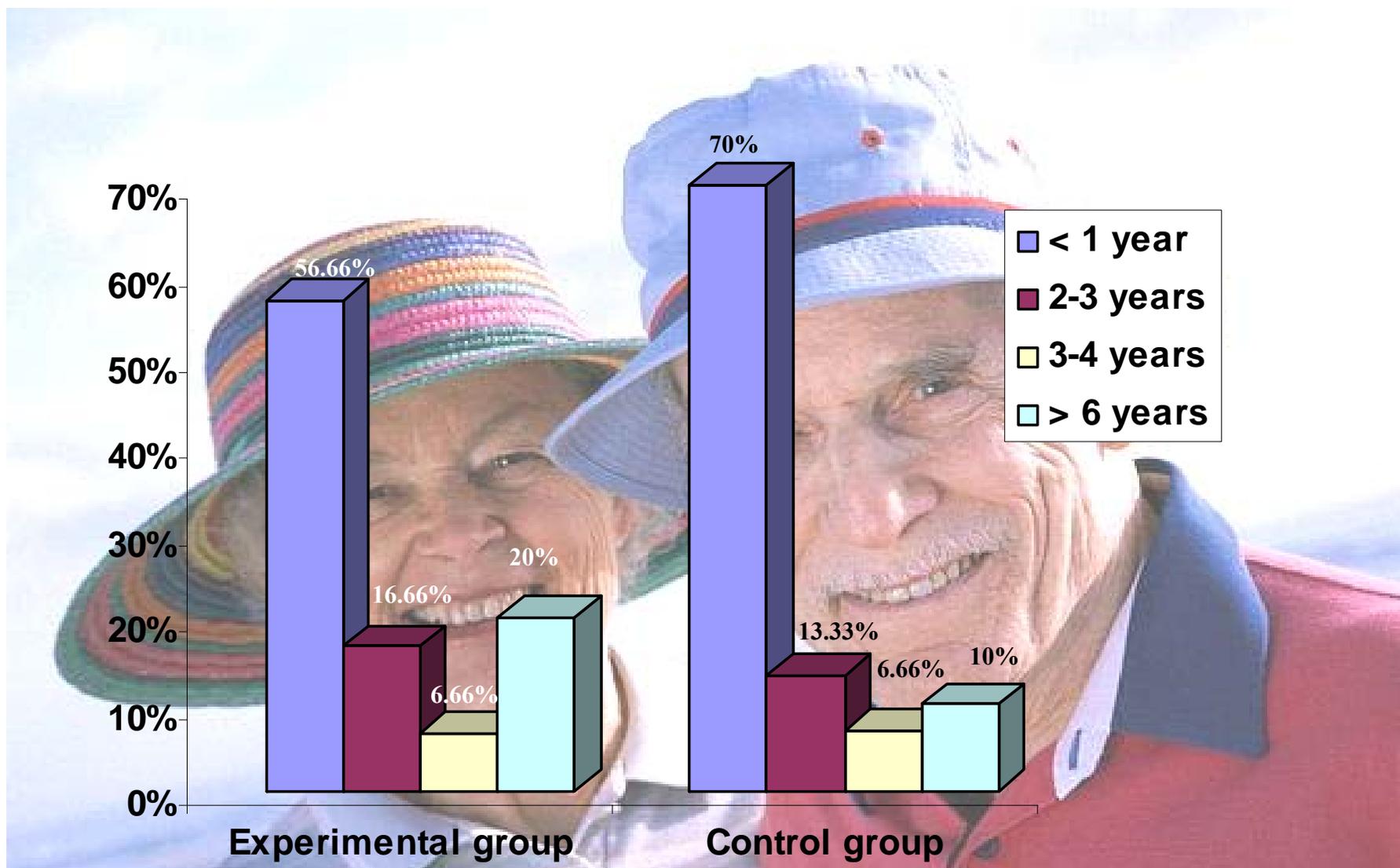


Fig. 6 Percentage distribution of duration of stay in the old age home

Table 2

Frequency and percentage distribution of clinical variables in the control and experimental group of the elderly.

(N=60)

Clinical variables	Control group n=30		Experimental group n=30	
	n	p	N	p
Any medical illness				
Diabetes mellitus	6	20	5	16.66
Hypertension	7	23.3	6	20
Arthritis	4	13.33	3	10
Respiratory problems	2	6.66	1	3.33
Others (specify)	-	-	-	-
Nil	11	36.66	15	50
History of taking medications for major illness				
Yes	4	13.33	1	3.33
No	26	86.66	29	96.66
Treatment seeking behavior of an illness(most frequently)				
Uses Medical facilities	25	83.33	27	90
Self medication	5	16.66	3	10
Any others specify	-	-	-	-
History of Smoking				
Smoker	9	30	8	26.6
Non- smoker	21	70	22	73.33
History of Alcoholism				
Non-alcoholic	21	70	27	90
Regular drinker	4	13.33	-	-
Social drinker	5	16.66	3	10
If yes, what was the relaxation training you underwent?				
Progressive muscle relaxation	2	6.66	3	10
Yogasana	4	13.33	5	16.6
Meditation	2	6.66	4	13.3
Others	-	-	-	-

It could be inferred from table 2 that Majority of the elderly had no history of taking medications for major illness (86.66%, 96.66%), had no history of previous hospitalization (73.3%, 80%), were using medical facilities most frequently (83.33%, 90%), as treatment seeking behavior, non- alcoholic (70%, 90%) and had no history of relaxation training before (86.66%, 73.33%) in the control and experimental group. Most of them were non – smokers (70%, 73.3%) and a significant percentage of them (36.66%, 50%) did not have any medical illness.

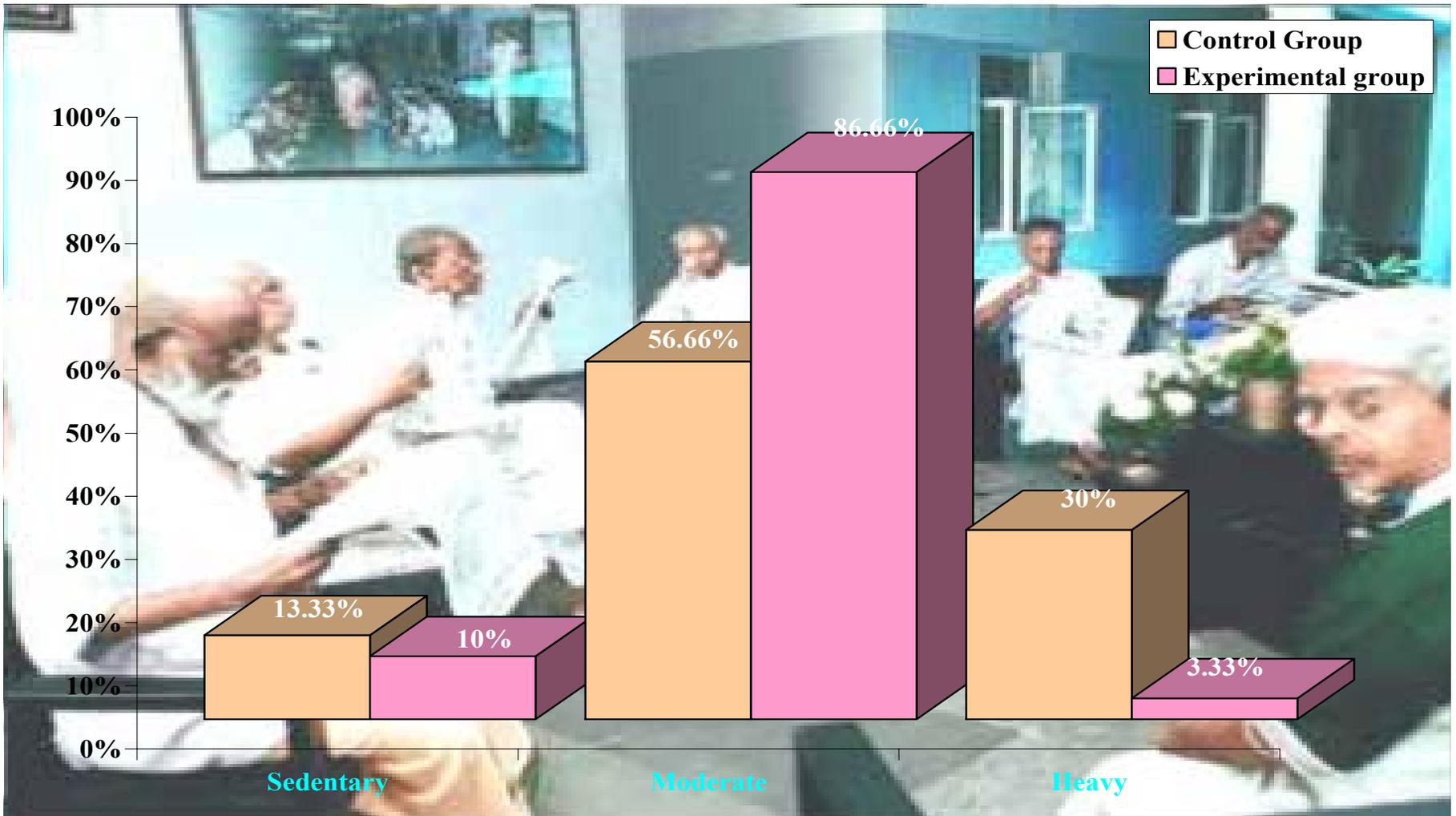


Fig. 7 Percentage distribution of physical activity among the elderly.

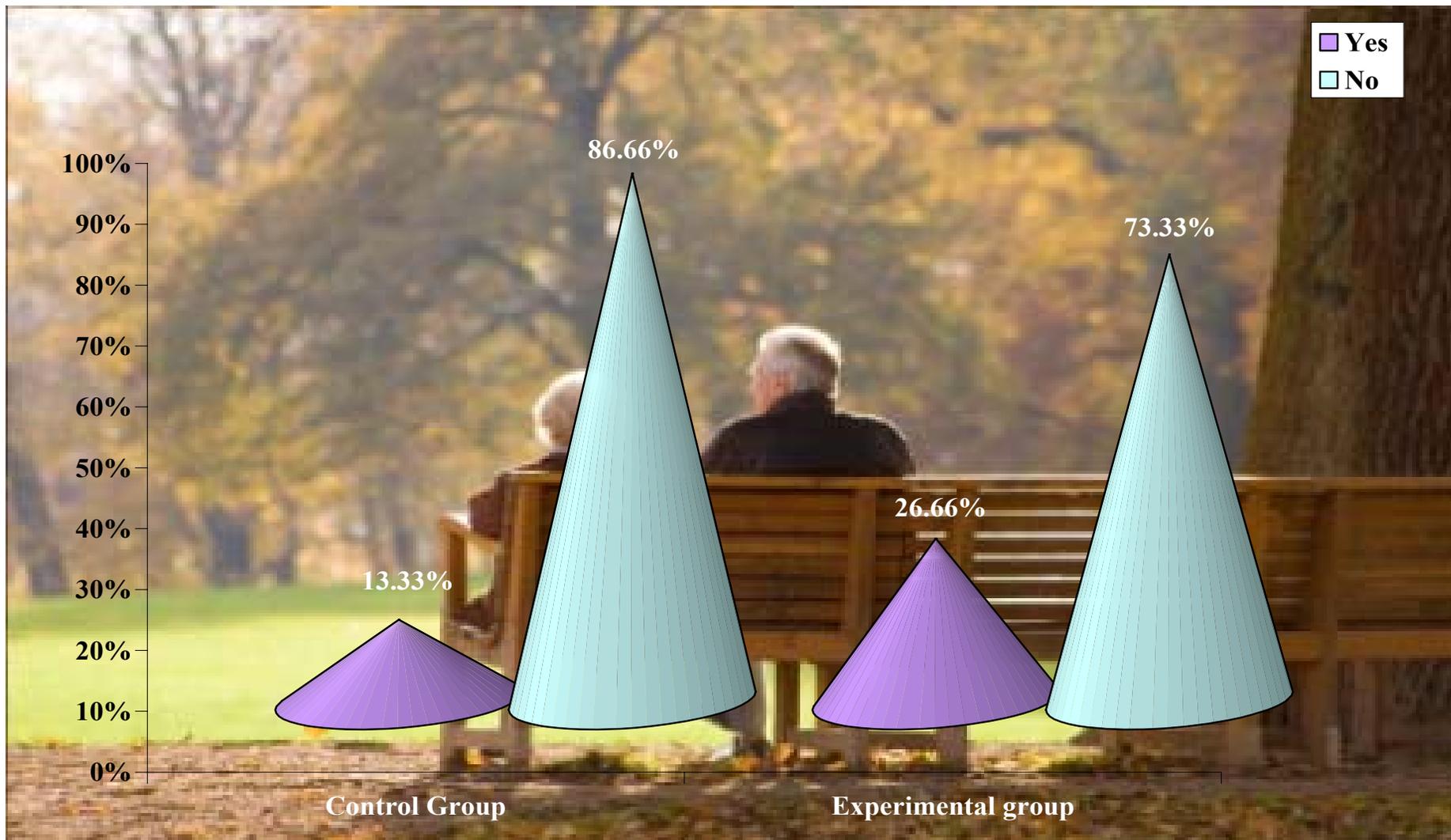


Fig. 8 Percentage distribution of history of relaxation training before among the elderly.

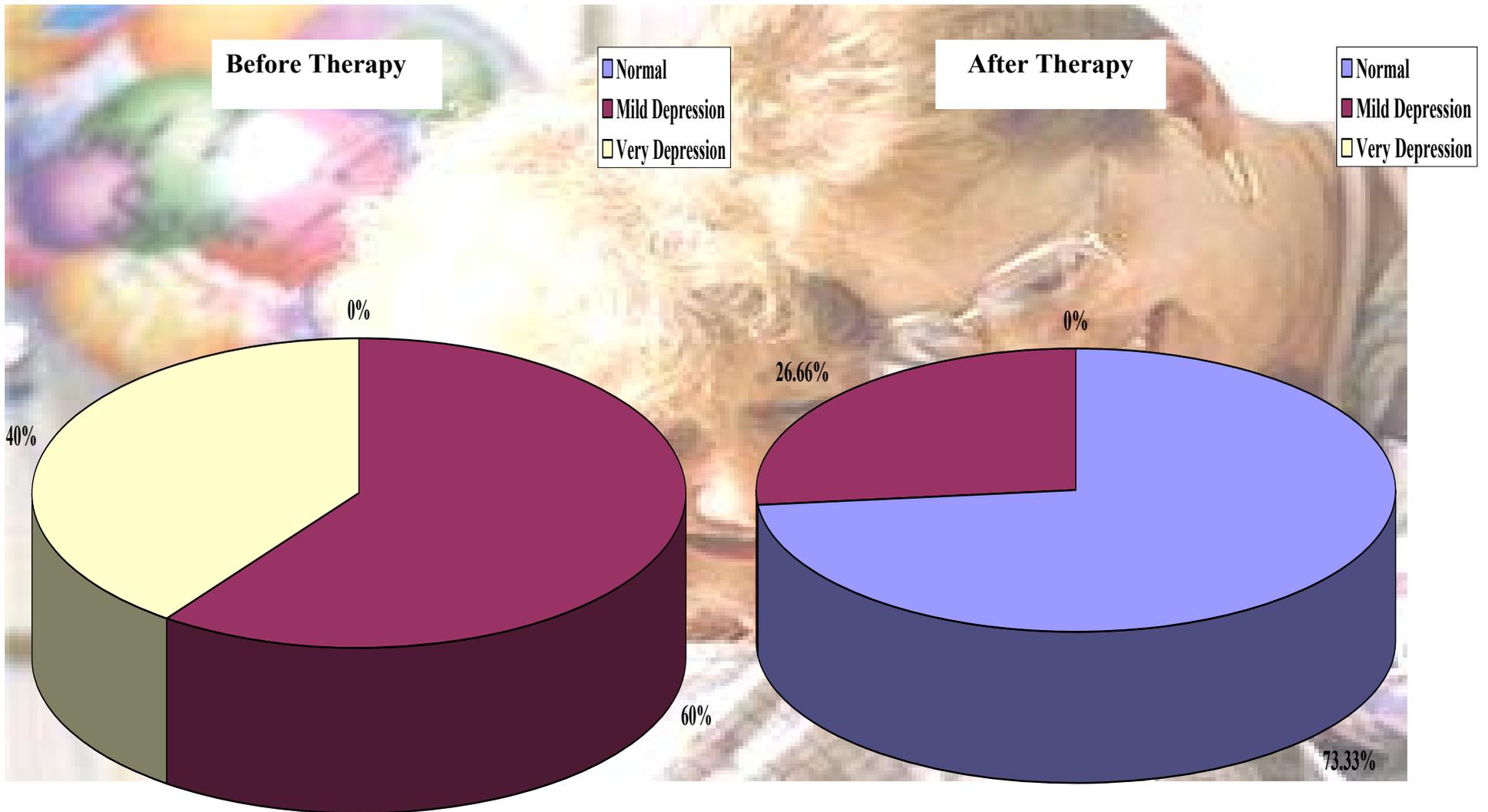


Fig.9 Percentage distribution of level of depression before and after humor therapy in experimental group of the elderly.

Table 3

Comparison of mean and standard deviation of the level of depression before and after humor therapy in the control and experimental group among the elderly.

(N=60)

Group	N	Mean	Standard deviation	t` value#
Control group				
Before therapy	30	16.2	2.639	0.626
After therapy	30	15.13	3.30	
Experimental group				
Before therapy	30	16.3	3.812	14.05**
After therapy	30	9.26	1.712	

**P<0.001, #- paired 't'test.

The data presented in table 3 depicted that the mean and standard deviation of elderly in the control group were (M= 16.2, 15.13) (SD=2.639, 3.30) before and after humor therapy which is not significant ($p>.05$), whereas in the experimental group the mean and standard deviation were less (M=9.26, SD=1.712) in comparison with before the administration of humor therapy (M=16.3, SD=3,812). The difference was found statistically significant at $p<0.001$ level of confidence and it can be attributed to the effectiveness of humor therapy.

Table 4

Comparison of mean and standard deviation of the level of depression in the control and experimental group before and after humor therapy among the elderly.

(N=60)

Group	N	Mean	Standard deviation	t` value#
Before therapy				
Control group	30	16.2	2.639	0.217
Experimental group	30	16.3	3.812	
After therapy				
Control group	30	15.13	3.30	14.67**
Experimental group	30	9.26	1.712	

**P<0.001, #- independent 't' test.

The data presented in table 4 depicted that the mean and standard deviation of elderly before therapy were (M= 16.2, 16.3) (SD=2.639, 3.812) in the control and experimental group which is not significant ($p>.05$), whereas after therapy the mean and standard deviation were less (M=9.26, SD=1.712) in comparison with the experimental group (M=15.13, SD=3.30). The difference was found statistically significant at $p<0.001$ level of confidence and it can be attributed to the effectiveness of humor therapy.

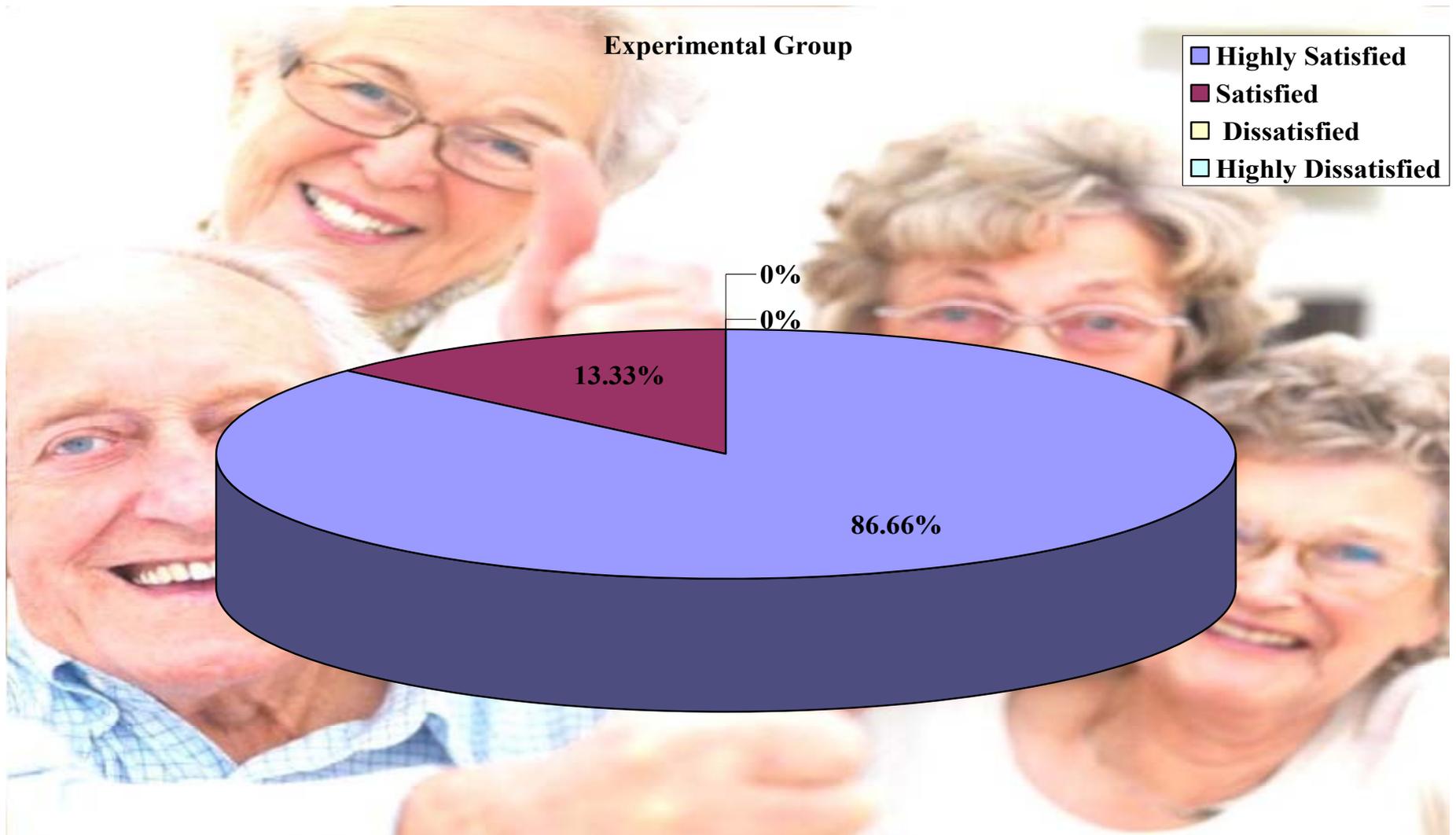


Fig. 10 Percentage distribution of the level of satisfaction on humor therapy in experimental group of the elderly.

Table 5

Association between the selected demographic variables and the level depression before and after humor therapy in the control group among the elderly.

(N=60)

Demographic Variables	Depression among control group							
	Before Therapy(pre test)			χ^2	After Therapy(post test)			χ^2
	Normal	Mild	Severe		Normal	Mild	Severe	
Age in years								
60-64 yrs	-	8	3	2.26 df=1	7	2	-	0.16 df=1
66-70yrs	-	3	2		2	3	-	
71-75yrs	-	5	2		4	3	-	
>76years	-	6	1		6	1	-	
Gender								
Male	-	6	4	1.36 df=1	5	5	-	2.65 df=1
Female	-	16	4		16	4	-	
Educational status								
Illiterate	-	5	2	5.76* df=1	6	1	-	1.44 df=1
Primary education	-	2	2		2	2	-	
Secondary education	-	5	2		4	3	-	
Higher secondary Graduate and above	-	7	1		6	2	-	
	-	3	1	3	1	-		
Marital status								
Married	-	11	6	8.13* df=1	9	8	-	33.64 ** df=1
Unmarried	-	3	1		3	1	-	
Widow/widow	-	3	0		3	-	-	
Separated/divorced	-	5	1		6	-	-	
Status of Spouse residing in this home								
Yes	-	1	4	3.08 df=1	1	4	-	7.12* df=1
No	-	21	4		20	5	-	

Number of children								
No children	-	16	6		15	7	-	
One	-	3	1	0.10	3	1	-	1.04
Two	-	1	1	df=1	1	1	-	df=1
More than two	-	2	-		2	-	-	
Type of family								
Nuclear	-	14	4	0.44	12	6	-	0.22
Joint	-	8	4	df=1	9	3	-	df=1
Duration of stay in the old age home.								
< 1 year	-	14	7		15	6	-	
2-3 years	-	3	1	7.84*	2	2	-	0.36
4-6 years	-	2	-	df=1	2	0	-	df=1
>6 years	-	3	-		2	1	-	

** p>0.001,*p>.05

Note: Categories under the variables were clubbed for the sake of chi square analysis.

It could be inferred from the table 5 that there is significant relationship between selected demographic variables (educational status, marital status and duration of stay in the old age home) and the level of depression. Hence the null hypothesis Ho2 was rejected.

Table 6

Association between the selected demographic variables and the level of depression before and after humor therapy in the experimental group among the elderly.

(N=60)

Demographic Variables	Depression among experimental group							
	Before Therapy(pre test)			χ^2	After Therapy (post test)			χ^2
	Normal	Mild	Severe		Normal	Mild	Severe	
Age in years								
60-64 yrs	-	9	5	12.96* * df=1	11	3	-	9.62* df=1
66-70yrs	-	3	0		3	0	-	
71-75yrs	-	4	3		5	2	-	
>76years	-	2	4		3	3	-	
Gender								
Male	-	4	4	0.44 df=1	5	3	-	1.67 df=1
Female	-	14	8		17	5	-	
Educational status								
Illiterate	-	0	2	10.24* df=1	1	1	-	0.26 df=1
Primary education	-	2	2		4	0	-	
Secondary education	-	6	4		7	3	-	
Higher secondary	-	5	1		5	1	-	
Graduate and above	-	5	3		5	3	-	
Marital status								
Married	-	9	7	1.44 df=1	10	6	-	12.26 ** df=1
Unmarried	-	3	0		3	0	-	
Widow/widow	-	0	2		1	1	-	
Separated/divorced	-	6	3		8	1	-	
Status of spouse residing in this home								
Yes	-	1	2	0.96 df=1	1	2	-	2.72 df=1
No	-	17	10		21	6	-	

Number of children								
No children	-	17	12		21	8	-	
One	-	1	-	0.64	1	-	-	0.26
Two	-	-	-	df=1	-	-	-	df=1
More than two	-	-	-		-	-	-	
Type of family								
Nuclear	-	10	6	0.45	11	5	-	0.35
Joint	-	8	6	df=1	11	3	-	df=1
Duration of stay in the old age home.								
< 1 year	-	12	5		12	5	-	
2-3 years	-	4	1	12.96*	3	2	-	0.82
4-6 years	-	1	1	df=1	2	0	-	df=1
>6 years	-	1	5		5	1	-	

** p>0.001,*p>.05

Note: Categories under the variables were clubbed for the sake of chi square analysis.

It could be inferred from the table 6 that there is significant relationship between selected demographic variables (age, educational status, marital status and duration of stay in the old age home) and the level of depression. Hence the null hypothesis Ho2 was rejected.

Table 7

Association between the Clinical Variables and the level of depression before and after humor therapy in control group of elderly.

(N=60)

Clinical variables	Level of depression among control group							
	Before intervention				After intervention			
	Normal	Mild	Severe	χ^2	Normal	Mild	Severe	χ^2
Any medical illness								
Diabetes mellitus	-	5	1	0.64 df=1	5	2		6.74* df=1
Hypertension	-	5	2		4	3	-	
Arthritis	-	2	2		2	2	-	
Respiratory problems	-	1	1		1	1	-	
Cataract	-	2	-		2	-	-	
Nil	-	7	2		8	1	-	
History of taking medications for major illness								
Yes	-	1	3	5.52* df=1	1	3	-	4.43* df=1
No	-	21	5		20	6	-	
History of Hospitalization within last five years								
Yes	-	7	1	1.14 df=1	6	2	-	0.11 df=1
No	-	15	7		15	7	-	
Treatment seeking behavior of an illness(most frequently)								
Uses Medical facilities	-	18	7	0.5 df=1	17	8	-	1 df=1
Self medication	-	4	1		4	1	-	
Any others specify	-	-	-		-	-	-	

History of Smoking	Smoker	-	7	2	0.11 df=1	6	3	-	0.56 df=1
	Non- smoker	-	15	6		15	6	-	
History of Alcoholism	Non-alcoholic	-	16	5	1.44 df=1	15	6	-	0.36 df=1
	Regular drinker	-	2	2		3	1	-	
	Social drinker	-	4	1		3	2	-	
Training or information regarding relaxation training before	Yes	-	4	-	1.69 df=1	4	-	-	1.96 df=1
	No	-	18	8		17	9	-	

** p>0.001,*p>.05

Note: Categories under the variables were clubbed for the sake of chi square analysis.

It could be inferred from the table 7 that there is no significant relationship between selected clinical variables and the level of depression. Except medical illness there is no significant relationship between other clinical variables and level of depression. Hence the null hypothesis Ho2 was accepted.

Table 8

Association between the Clinical Variables and the level of depression before and after humor therapy in experimental group of elderly.

(N=60)

Clinical variables	Level of depression among experimental group							
	Before intervention				After intervention			
	Normal	Mild	Severe	χ^2	Normal	Mild	Severe	χ^2
Any medical illness								
Diabetes mellitus	-	4	1	4* df=1	5	-	-	36** df=1
Hypertension	-	4	2		6	-	4	
Arthritis	-	1	2		2	1	1	
Respiratory problems	-	1	-		1	-	0	
Cataract	-	-	-		-	-	-	
Nil	-	8	7		8	7	-	
History of taking medications for major illness								
Yes	-	1	-	0.67 df=1	-	9	7	0.67 df=1
No	-	17	12		-	-	-	
History of Hospitalization within last five years								
Yes	-	4	2	0.12 df=1	4	2	-	0.15 df=1
No	-	14	10		18	6	-	
Treatment seeking behavior of an illness(most frequently)								
Uses Medical facilities	-	16	11	0.16 df=1	20	7	-	0.16 df=1
Self medication	-	2	1		2	1	-	
Any others specify	-	-	-		-	-	-	

History of Smoking	Smoker	-	4	4	0.44	6	2	-	0.16
	Non- smoker	-	14	8	df=1	16	6	-	df=1
History of Alcoholism	Non-alcoholic	-	16	11	0.16	21	6	-	5.75
	Regular drinker	-	-	-	df=1	-	-	-	df=1
	Social drinker	-	2	1		1	2	-	
Training or information regarding relaxation training before.	Yes	-	6	2	1.01	6	2	-	0.01
	No	-	12	10	df=1	16	6	-	df=1

** $p > 0.001$, * $p > .05$

Note: Categories under the variables were clubbed for the sake of chi square analysis.

It could be inferred from the table 8 that there is significant relationship between selected clinical variables (medical illness) and the level of depression. Except medical illness there is no significant relationship between other clinical variables and level of depression. Hence the null hypothesis Ho2 was accepted.

Table 9

Item wise frequency and percentage distribution of the level of satisfaction regarding humor therapy among the elderly.

(N = 30)

Items	Highly satisfied		Satisfied		Dissatisfied		Highly dissatisfied	
	n	P	N	p	n	p	n	p
	Explanation regarding the humor therapy	25	83.3	5	16.7	-	-	-
Approach of the researcher	26	86.6	4	13.3	-	-	-	-
Time spent by the researcher	27	90	3	10	-	-	-	-
Duration of the programme	26	86.6	4	13.3	-	-	-	-
Arrangements made during the programme	24	80	6	20	-	-	-	-
The programme was easy to understand	28	93.3	2	6.66	-	-	-	-
Use of Audio-visual aids	25	83.3	5	16.7	-	-	-	-
Involvement of participants	27	90	3	10	-	-	-	-
Given at the appropriate time	25	83.3	5	16.7	-	-	-	-
Usefulness	27	90	3	10	-	-	-	-

It can be inferred from the table 9 that majority of them (86.66%) were highly satisfied with all the aspects of humor therapy.

Summary

This chapter has dealt with analysis and interpretation of data obtained by the researcher. The analysis of the results showed that in the experimental group the level of depression have reduced after administration of Humor therapy when in compared to the before the administration. This implied that Humor Therapy has the effect on level of depression.

CHAPTER - V

DISCUSSION

An experimental study was conducted to assess the effectiveness of humor therapy upon depression among the elderly in selected old age homes, Chennai.

Objectives of the study

1. To find out the prevalence of depression among the elderly in selected old age homes.
2. To assess the effectiveness of humor therapy on depression among the elderly.
3. To find out the association between the selected demographic and clinical variables and the level of depression among the elderly.
4. To determine the level of satisfaction of humor therapy among the elderly in the experimental group.

The study was carried out upon 60 elderly clients at selected old age homes Chennai. The level of depression was assessed before and after the therapy in the control and experimental groups.

The discussion is presented under the following headings:

- Prevalence of depression among the elderly clients.
- Demographic variables of the elderly with depression.
- Clinical variables of the elderly with depression.
- Effectiveness of humor therapy on depression.
- Association between selected demographic and clinical variables and level of depression of the elderly.
- Level of satisfaction of humor therapy

Prevalence of depression among the elderly

The prevalence of depression among the elderly residing in the old age home was as follows as mild depression (46.62%) and very depressed (18.91%) and overall as (65.53%). These findings indicate that depression is highly prevalent among the elderly >70 years of age. The findings are consistent with the study cited in Jorm (2000) stated that the community-dwelling elderly displayed significantly higher levels of depressive symptoms than younger cohorts. This was reflected in the prevalence rates and in all the scales of psychological distress measured in the survey.

Depression is very common, affecting about 151 million people worldwide and one in five people in Ireland. The prevalence of depression is 50% higher for women than men, but women are also more likely to be treated for the condition as they are more likely to seek professional help. The gender difference in treatment rates tends to disappear in the elderly, although the elderly continue to be at high risk of depression. Although depression is common, it is often underestimated and misunderstood by the public. Stigma creates a strong barrier both to diagnosis and treatment and may perpetuate feelings of isolation by those experiencing depression.

Even though depression is highly prevalent, most of the time this is under diagnosed and ignored in the society. However when it is identified, depression can be corrected through various alternative and complementary therapies with pharmacological therapy in selected cases. It undergoes the need for the nurses to assess the prevalence of depression through simple screening instruments to diagnose, intervene and refer according to the needs of the clients.

Demographic variables of the elderly with depression

Most of the elderly in the control and experimental group belongs to the age group of 65-70 yrs (53.33%, 56.66 % respectively). These findings were supported by studies conducted by Petronella J (2007). Depressive symptoms are highly prevalent in the elderly and increase with age. This increase seems to be attributable to age-related changes in risk factors rather than to ageing itself. With regard to the risk factors found, attention should perhaps be paid to functional disability, loneliness and apprehensiveness for falling since these risk indicators are amenable for improvement.

Most of them were females (66.6%, 73.3%) respectively. This indicated the fact that depression is more common among females and is consistent with other studies. Women are almost twice as likely as men to experience depression. Research continues to explore how this psychological problem affects women. At the same time, it is important for women to increase their awareness of what is already known about depression, so that they seek early and appropriate treatment (Psychology Information Online).

It was also noticed that most of them were illiterate (53.33%, 50%) respectively. The data collected from the old age population reveals that the educational status was very low since past 5 decades. A high risk of depression was found among the elderly of a lower educational level. Education is one of the general criteria in the assessment of socio-economic status, besides job and income. The study cited that the educational level of the subjects was generally low, with more than half being illiterate. Their low level of education was accounted for by the unpopularity of formal education during their childhood. It is well established that low socio-economic status is frequently associated with poor health, a condition related to depression.

Low educational status may influence negatively in the treatment seeking behavior as they may not be aware of depression as illness.

It was also noticed that most of them were married (56.6%, 53.3%) in the control group and experimental group. The relation of marital status to depression among the elderly is less controversial. It is generally believed that depression associated with widowhood is probably due to the bereavement. In addition, loneliness, one of the depressive manifestations, is commonly seen in the elderly regardless of their marital status.

In the experimental group all of them were Hindus (100%) and in the control group most of them were Christians (86.6%) as the institutions were run by Hindu and Christian trusts respectively.

Most of them were living in nuclear families (60%, 53.3%) before joining the old age home in the control and experimental group, intensifying depression might have increased due to lack of care and support from the family members. Talking openly, expressing one's concerns and feelings in a joint family is easier than expressing with the nuclear families. Since members from a joint family would be supportive to each other and be optimistic towards their feelings in helping them to promote positive attitude towards self.

The duration of stay in the old age home for most of the elderly (70%, 56.66%) were less than 1 years in the control and experimental group.

Hence it is the responsibility of the institution and the health care professionals to implement variety of complementary therapies in the old age homes and this information should be disseminated to the inmates to promote the overall quality of life.

Clinical variables of the elderly with depression

Findings of the clinical variables show that hypertension was the major illness present in the geriatrics in both the control and experimental group (23.3%, 20%). Hypertension found to be more when compared to other illness. It may be due to the fact that blood pressure increases with advanced age.

Findings of the clinical variables show that most of the elderly were non smokers and non alcoholics. This may be due to underreporting and unavailability of substance and alcohol as they are residing in the old age home. Smokers and alcoholics may use these substances and alcohol as an alternative to get relief. It is the responsibility of the health care professionals to educate the elderly to quit smoking and make them clear understand the benefits of smoking cessation like health improvement, self esteem, appearance and improving the economic status of their family.

Males adapt smoking and alcoholic habits due to personal and official issues in their day to day life and these habits have an impact on depression. The above findings were supported by Silberman (1997) who found that even moderate consumption of alcohol initially increases the level of depression to mild and their subsequent use increases to severe stage.

Eighty and 73.33% have no previous history of hospitalization and it is shown that the elderly had not got admitted in the hospital due to any major illness. Previous hospitalization has both advantages and disadvantages. From the experience and training attained from previous hospitalization, the elderly would be able to cope up with their problems and carry out any complimentary therapy with more interest and knowledge.

Majority of them did not had any information about humor therapy (73.33%, 86.66%) which clearly indicates that the elderly have no idea to reduce their depression level and increase relaxation which denotes the need of the nurses to awareness about the complimentary therapies available to promote both the physical and psychological wellbeing. These therapies will reduce the level of depression and improves the quality of life.

Effectiveness of humor therapy on depression

The level of depression among experimental group in the pretest was high (M=16.33, SD=3.812) in contrast to the post test level of depression (M=9.26, SD=1.712) which is significant at $p < 0.001$ level. Whereas in the control group the level of depression was almost the same (M=16.2, SD=2.639) in pretest and post test (M=15.13, SD=3.30) which shows that it is not significant. The study results showed that humor therapy reduced depression effectively among the elderly.

Haug (2007) conducted a study to assess the depressive symptoms of the older residents at nursing home in Thailand with 138 older residents from 8 nursing homes located in southern Thailand. The result showed that 81.1% of those residents were identified as being depressed. Hirsch (2008) conducted a study to assess the effects of humor therapy on depressive symptoms of the elderly. The result showed that humor therapy is seemed to profit best for elderly with depressive symptoms.

It can be interpreted that many individuals develop depression in this world due to various reasons and it was clear that they need to undergo some kind of relaxing or complementary therapy to reduce depression. These produce hormones which constrict

blood vessels and suppress immune activity. Humor therapy lowers the level of epinephrine and dopamine which is associated with elevated blood pressure.

Humor therapy is aerobic and provides a workout for the diaphragm and it increases the body's ability to use oxygen. It also brings a positive emotion that enhances the quality of life. It also reduces the pain and aid the healing process and offers a powerful distraction from pain by releasing neurotransmitters.

The biggest benefit of humor is it has no known side effects. The major contribution from humor therapy to physical health includes muscle relaxation, reduction of stress hormones, enhancement of immune system, pain reduction, cardiac exercise, decreasing blood pressure and empties the lung to receive more air.

Humor therapy is used as a complementary therapy to promote health and cope with stressful situation. There is no scientific evidence that humor can cure depression but it can reduce depression and enhance a person's quality of life and has physical effects because it can stimulate the circulatory system, immune and other systems in the body. Humor therapy is considered safe when used along with conventional therapy.

Humor therapy was simple to carry, interesting and involved creativity which motivated the elderly to perform it every day even in the absence of the researcher. Thus it can be considered as an allied to pharmacological and surgical interventions as it can promote wellbeing and helps the elderly in experiencing happiness without any side effects and complication.

If humor therapy is not a recognized therapy in the institution nurses may wish to advocate it to be recognized. Humor remains potentially and exciting and as an innovative tool for nursing therapy. Humor therapy is required to reduce depression in old age homes.

Association between the selected demographic and clinical variables and the level of depression of the elderly.

Chi square test was used to find out the association between selected variables and level of depression. It was found that there was significant association between selected variables (age, educational status, marital status, medical illness and duration of stay in the old age home) and level of depression in both the control and experimental group. From this inference we can understand that the level of depression among the elderly is slightly influenced by the demographic variables.

Severe depression was found more in people aged >70 yrs when compared to the counterparts (60-70 yrs). This indicates the fact that, as the age increases the intensity of depression also increases. Similarly severe depression was found more in the elderly who had less education. This indicates the fact that the intensity of depression is severe in less educated. This may be due to the fact that less educated may not be able to cope with day to day stressors which may lead to depression.

In the control group, severe depression was reported more in married elderly. This may be due to the emotional factors, i.e the elderly might have been abandoned by their spouse or their children which may lead to severe depression.

It is also found that severity of depression is more in the elderly who are residing in the old age home for >1 yr. It is true that as the days go on without any entertainment, support and novelty life becomes very bored and people tend to be depressed more, which is further confounded by loneliness, uncertainty of future and fear of death as they reside in old age home for longer period.

The study conducted by Suresh on institutionalized older adults, revealed that there was a significant association between the level of depression and socio

demographic variables like number of children and leisure time activity of the elderly at the level of $p < 0.05$ respectively. So it showed that the demographic variables influence the level of depression among the elderly.

It is also interpreted that psychological factors play an important role in depression. Complimentary therapies like yoga, music and humor therapy can only improve both the physical and psychological aspects of the individual and it is proved through this research. The above findings give a clear direction to health care professionals that everyone must be paid equal attention with regard to depression and humor therapy should be provided irrespective of their demographic characteristics.

In conclusion this study has thrown light on the importance of the role of the nurses in identifying the elderly with depression and they can provide humor therapy to promote psychological wellbeing, which definitely influences regular practice of humor therapy.

Level of satisfaction of humor therapy

Finding a complementary therapy that is agreeable to the client is not always easy. Satisfaction arises from a person when a therapy is balanced between the client choice and professional responsibility and high level of satisfaction can be obtained when the effects of the therapy are already expected by the nurse.

Before initiating the therapy, a team conference with the patient to develop a plan of care related to the administration of humor therapy can be conducted to make the clients involved in the therapy. It should be thoroughly explained to them that this plan of care is to provide them comfort and to reduce depression which in turn will make them more involved in the therapy.

It is the responsibility of the nurses to seek more information and guidance from the training institution and the colleagues as much as possible and explain it to the client to seek more level of satisfaction.

Findings of the study suggest that majority of the elderly were highly satisfied with humor therapy (93.33%). The participants opined that they felt very light after the therapy and expressed a short of relief from tension and worries. They felt that they were able to build a good interpersonal relationship with other inmates.

The findings were supported by Fabiola in 2004, who investigated that patients used humor sense to get relieved from tension, developed more self efficacy, and more positive function in satisfaction. The levels indicated a strong association between humor therapy and satisfaction and suggested in which humor therapy helps to maintain rapport in the health care professional and patient relationship.

Summary

This chapter has dealt with the objectives of the study, major findings of the demographic variables and clinical variables of the elderly client with depression, level of depression of the elderly before and after humor therapy, mean and standard deviation of level of depression of the elderly before and after humor therapy, association between the selected demographic variables and level of depression of elderly and the level of satisfaction of humor therapy.

CHAPTER - VI
SUMMARY, CONCLUSION, IMPLICATIONS AND
RECOMMENDATIONS

Summary

The aim of the study was to assess the effectiveness of humor therapy upon depression among elderly population at selected old age homes, Chennai.

Objectives of the study

1. To find out the prevalence of depression among elderly people in selected old homes.
2. To assess the effectiveness of humor therapy on depression among the elderly population.
3. To find out the association between the selected variables and the level of depression among elderly people.
4. To determine the level of satisfaction of humor therapy in the experimental group of elderly people.

The study utilized the true experimental research design and the study was conducted at Anandham Home for the Aged, Kallikuppam and Little Drops Home for the Aged, Paraniputhur. Sixty elderly clients were selected and randomizations of the settings were done. Out of which, 30 clients were assigned to control group and 30 clients were assigned to experimental group. The depression scores were assessed for both the control and experimental group in both before and after therapy. Humor therapy was given in the experimental group for a period of two weeks, 1hr in a day.

Null Hypotheses

Ho1: There will be no significant difference in the depression scores in elderly people before and after humor therapy in control and experimental group.

Ho2: There will be no association between the selected Demographic and clinical variables and the level of depression before and after humor therapy in the experimental and control group.

The conceptual framework for this study is based on Roy's adaptation model [1995] given by Sister Callista Roy with stimuli, adaptation mode, and behavior. An extensive review of literature and guidance by experts formed the foundations to the development of the tool. An experimental research approach was used to achieve the objectives of the study.

The investigator used a Demographic variable proforma, Clinical variable proforma, Geriatric Depression Scale and a rating scale on the level of satisfaction of the humor therapy to collect the data. The data collection tools were validated and reliability was established. After the pilot study, the data for the main study was collected. The collected data was tabulated and analyzed using descriptive and inferential statistics.

Major findings of the study

Prevalence of depression among elderly people

The prevalence of depression among elderly people residing in the old age home was as follows as mild depression (46.62%) ,very depressed (18.91%) and overall as (65.53%).

Demographic variables of the geriatrics with depression

A significant percentage of the elderly people in experimental and control were aged between 60-65 yrs (36.66%, 46.66 %), females (73.3%, 66.6%), have studied up to secondary education (33.3%, 23.3%). Most of them were married in experimental group and control group (53.33%, 56.6%). Almost all of them (100%) were Hindus in the experimental group; whereas the majority of the participants in the control group were Christians (86.6%). The duration of stay in the old age home for majority of the elderly people were ≤ 1 year in experimental group (70%) and most of the elderly people in the control group (56.6%). Hypertension was the major illness present in both experimental and control group (20%, 23.3%) of the elderly people

Level of depression of geriatrics before and after humor therapy

Majority of geriatrics in the experimental and control group had mild depression (60%, 73.33%) and very depressed (40%, 26.66%) in the pre test. In the post test, 73.33% of the geriatrics in the experimental group has come to normal and 26.66% had mild depression. Where as in control group 70% had mild depression and 30% were very depressed. So the null hypothesis H01 is rejected.

Mean and standard deviation of level of depression of elderly people before and after humor therapy

The depression score among experimental group in the pretest was high (M=16.33, SD=3.812) while comparing to the post test depression score (M=9.26, SD=1.712) which is high significant at $p < 0.001$ level. Whereas in control group the depression score was almost the same (M=15.76, SD=2.639) in pretest and post test

(M=15.13, SD=3.30) which is not significant ($p < 0.05$). The study results showed that humor therapy reduced the level of depression among the geriatrics.

Association between selected demographic variable and the level of depression of elderly people

Chi square test was done and association was tested. It was found that there was significant association between the selected variables (age, educational status, marital status and duration of stay in the old age home and medical illness) and the level of depression in both the experimental and control group. Hence the null hypothesis was rejected. There were no significant relationship between other selected variables and the level of depression, hence the null hypothesis was accepted.

Level of satisfaction of humor therapy

The study results indicated that the geriatrics had high level of satisfaction on receiving humor therapy (86.66%)

Conclusion

The findings of the study revealed that being in old age home and the feeling of loneliness were the causes of depression in the elderly people. Physical limitations and financial constraints added to their agony. Humor therapy is a non pharmacological psychosocial intervention for the treatment of depression.

Implications

Based on the findings of the study the researcher recommended the implications on Nursing practice, Nursing education, Nursing administration, Nursing research.

Nursing practice

The findings of the study revealed that the elderly living in the old age homes had depression and humor therapy is an effective treatment of depression. All public health workers can use this therapy in their settings to treat elderly depression in the group. All community workers can create awareness about depression of elderly and its effective management.

Nursing Education

With the emerging health care trends nursing education must focus on innovations to enhance the nursing care. The nursing students should be taught the importance of relieving depression and enhance the quality of life of elderly. Therefore the nursing students should be introduced with the alternative methods of treating depression, knowledge about the factors which enhance and reduce the depression, knowledge about the factors which enhance and reduce depression. They can be educated about the group therapy.

Nursing Administration

With technological advances and ever growing challenges of health care, the administrators have a responsibility to provide nurses with substantive continuing education opportunities to undergo training on psychosocial intervention including humor therapy.

This enables the nurses to update their knowledge in the latest innovations and demonstrate high quality care. The nurse administrators should periodically organize formal training programs to educate the public on the importance of elderly depression management.

Nursing Research

The professionals and students can conduct further studies on depression and various other interventions to promote psychological well being in old age homes. There is a need for extensive and intensive research in this area. It opens a large avenue for research, so as to generate more scientific data based on which new strategies, innovational methods of diversional therapy, development of good and effective centralized humor therapy session for reducing the depression level, focus on patient's interest in quality and and cost effective. Since humor is a holistic approach it can be used in all areas and among all age groups.

Recommendations

- The study can be conducted on a large sample to generalize the results.
- The study can be conducted in other settings like the community and hospitals etc.
- A time series design can be conducted with an interval of 2, 4 and 6 months to assess the long term effects of humor therapy upon depression.
- A study can be conducted on quality of life among the elderly.

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