

**EFFECTIVENESS OF AROMATHERAPY ON
JOINT PAIN AND DEPRESSION
AMONG ELDERLY**



Dissertation submitted To

**THE TAMIL NADU DR. M.G.R MEDICAL UNIVERSITY
CHENNAI**

IN PARTIAL FULLFILLMENT OF REQUIREMENT FOR THE AWARD OF
DEGREE OF

MASTER OF SCIENCE IN NURSING

APRIL 2015.

**A STUDY TO ASSESS THE EFFECTIVENES OF AROMATHERAPY
ON JOINT PAIN AND DEPRESSION AMONG ELDERLY
IN LITTLE DROPS HOME FOR AGED DESTITUTE
AT CHENNAI 2014 – 2015.**

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ABSTRACT

Joint pain is the most common reason for an elderly to seek medical care and the number one reason for elderly to take medication. Depression is most common among elderly those who staying in home care settings. It is very essential to treat and reducing joint pain and depression among elderly in earlier stage. There are so many complimentary therapies are there to reduce both joint pain and depression among elderly which does not require hospital visit.

A Study was conducted to assess the effectiveness of aromatherapy on joint pain and depression among elderly in Little Drops home for aged destitute at Chennai. The objective of the study to determine the effectiveness of aromatherapy on joint pain and depression among elderly. The hypothesis formulated was there is significant association between the aromatherapy and joint pain, depression among elderly. The review of literature included the related studies which provide a strong foundation for the study including the basis for conceptual framework and formation of tool.

The research design used for this study was pre experimental one group pre test post test design. It was carried out with 30 samples that fulfilled the inclusion criteria. Purposive sampling technique was used to select the samples. University pain assessment scale and short form of geriatric depression scale was used to assess the pre test and post test level of joint pain and depression. Aromatherapy was given for elderly for the duration of 15 to 20 minutes. The post test was conducted at the last day of the intervention by using the same tool.

The analysis revealed that the pre test mean score of joint pain was 6.00 with standard deviation of 1.74 and in post test mean score was 2.43 with standard deviation of 1.85. The paired 't' test value of 17.690 was very highly significant at $p < 0.001$ level. The pre test mean score of depression was 8.60 with the standard deviation of 2.11 and in post test mean score was 3.30 with the standard deviation 1.84. The paired 't' test value of 19.495 was very highly significant at $p < 0.001$ level. Thus it indicates the effectiveness of aromatherapy on joint pain and depression among elderly.

CHAPTER I

INTRODUCTION

“Grow old with me, the best yet to come”

Health is a resource of every day of life, not the objectives of living. Health is a positive concept emphasizing social and personal resources as well as physical capacities. Health is achieved through a combination of physical, mental, social wellbeing which together is commonly referred to as the health triangle.

A man's life is normally divided into five main stages namely infancy, childhood, adolescence, adulthood and old age. In each of these stages, an individual has to find himself in different situations and face different problems. Older adults are the most rapidly growing segment of the population. By the year 2030, the world population, aged 65 years, is projected to increase approximately to 973 million, increase from 6.9% to 12% in the developing countries and it is a factual thing that they are not being cared according to their needs and problems.

The life of senior citizens becomes more difficult when problems related to fulfillment of basic requirements such as social relations, personal care, nutrition and accommodation are added to old age health problems. Advancing age seems to bring meaningless misery mainly because the elderly have been neglected and been passed by modern society. A major portion of the older populations are now being treated in day care centers or homes.

In this fast moving world there is an increasing number of old age homes due to negligence of the elderly. As a result, they become more vulnerable to physical and mental ailments. Institutional care is not just enough to rejuvenate their dormant mind and spirit. They need hospice care which includes keeping the old men and women at home in a conducive family environment and nursing them.

Pain is a universal, complex and subjective experience. It is the most common reason for a client to seek medical care and the number one reason for a person to take medication. Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Joint pain is discomfort that arises from any joint, the point where two or more bones meet.

Joint pain is common problem among elderly due to increased risk of calcium and vitamin D insufficiency. Joint pain is sometimes called arthritis or arthralgia. Any Changes in the muscles, joints and bones affect the posture and gait that lead to weakness and slowed movement. Joint pain is rarely an emergency. Most cases of mild joint pain can be successfully managed at home. Joint pain is a common complaint and does not typically require a hospital visit.

Depression is one of the most common psychological conditions during the normal course of life with increased loss and disappointments. It is a mood disorder in which feelings of sadness, loss, anger or frustration interfere with daily life for weeks or longer. Depression refers to a heterogeneous set of phenomenon ranging from simple mood swings to severe affective state. Geriatric depression is a major health hazard with devastating outcomes. Depression in old age is quite complex and it is much difficult to diagnosis due to medical illness, dementia syndrome and heterogeneity of patients in the population.

Depression is most common among elderly those who staying in home care settings. Depression is the fourth leading cause of disease burden in the world. A study conducted on the problem of old age among institutionalized and non-institutionalized older adults of Chennai and Trichy in Tamilnadu showed that the institutionalized elderly had higher prevalence of depression than those non-institutionalized.

Aromatherapy is the use of essential oils from plants for healing. The word “aroma” makes it sound as if the oils are inhaled, it is also used to massage into the skin or rarely taken by mouth. Essential oils are gaining new attention as an alternative treatment for infections, stress and other health problems. Essential oils

used for therapeutic purposes for nearly 6,000 years. The ancient Chinese, Indians, Egyptians, Greeks, and Romans used them in cosmetics, perfumes and drugs. Essential oils were also commonly used for spiritual, therapeutic, hygienic and ritualistic purposes.

In 1928, Gattefosse, French chemist founded the science of Aromatherapy and discovered the healing properties of lavender oil when applied it over the burns injury caused by an explosion in laboratory. Then analyzed the chemical properties of essential oils and used to treat burns, skin infections, gangrene and wounds in soldiers during World War I.

By the year of 1950 massage therapists, beauticians, nurses, physiotherapists, doctors and other health care providers began to use Aromatherapy. Aromatherapy became popular in the United States in the year of 1980s. Aromatherapy is used in a wide range of settings from health spas to hospitals to treat a variety of conditions. Aromatherapy seems to relieve pain, improve mood and promote a sense of relaxation. There were several essential oils used for Aromatherapy such as lavender, rose, orange, bergamot, lemon, sandalwood and others have been shown to relieve anxiety, stress and depression.

NEED FOR THE STUDY

Aging is the natural phenomena and inevitable process. Aging is an inevitable developmental phenomenon bringing along a number of changes in physical, hormonal, psychological and the social conditions. Aging begins with conception and terminates with death. A person is said to be healthy when he is free from physical and mental distress.

Elderly people need better physical health care and psychological care to nourish their wellbeing. Due to frail health condition, lack of adequate care by the family members, negligence by care givers, busy life schedule due to urbanization, elderly people are getting neglected and humiliated. This may lead to the development of psychological shunning. Older people are in need of vital support

for their overall quality of life. It is essential to understand the concept of old age homes thoroughly and evaluating psycho social status of senior citizen and related factors.

At present 95 million people in India are above the age of 60, by the year of 2025 nearly 80 million will be added to this population. Changing the family value system, economic compulsions of the children, neglect and abuse causes the elderly to fall through the net of family care. Homes for aged are ideal for elderly people who are alone, face health problems, depression and loneliness.

Pain is a major problem that causes suffering and reduces the quality of life. The financial impact of pain is staggering. Unrelieved and inadequate management of pain cost an estimated 100 billion each year as a result of longer hospital stay, re-hospitalization, visit to outpatient clinics and emergency rooms. Pain control is a contemporary issue that is of immense importance due to the devastating and humanizing effects it can have upon an individual.

The World Health Organization identified the three most commonly reported anatomical pain sites among in elderly patients such as back pain (47.8%), headache (45.2%) and joint pain (41.7%). The majority (68%) of elderly patients with persistent pain in this study reported pain in at least two anatomical sites. So the joint pain is very common among elderly and it should be treated as earlier as possible.

Geriatric depression is a major health hazard with devastating outcomes. Kalpan and Shaddock stated that 15 to 20% of elderly may experience depression. Depression also increases the risk of suicide, especially in elderly. The suicide rate in people ages 80 to 84 is more than twice that of the general population due to depression. The National Institute of Mental Health considers depression in people age 65 and older to be a major public health problem. Depression in older adults is a widespread problem, but it is not a normal part of aging. It is often not recognized or treated. Depression affects 1 in 5 older people living in the community and 2 in 5 living in care homes.

There are so many complementary therapies to treat clinical conditions physically and mentally. Complementary therapies helps to relieve pain have been popular for many years mainly as adjuncts to drug therapy. Effectiveness of these measures is attributed to the Gate Control Theory. These measures include distraction, imagery, relaxation, hypnosis, massage, music therapy, Aromatherapy, prayer and meditation. Among the various measures many research showed that Aromatherapy has been gaining popularity as a simple and easy administrative mode of alternative therapy for, not only pain but also insomnia, anxiety, depression, headache, nervous tension, hypotension, cardiac regulation, integumentary disorders, sinusitis and infections. The use of Aromatherapy massage is rising in popularity among patients and healthcare professionals.

Experts speculate that our sense of smell plays a very important role among other senses. That means it is incredibly powerful, about 10,000 times stronger than other senses. Aromatherapy uses this power of smell in a wide range of settings to treat various ailments. In general it appears to ease pain, enhance mood and promote a sense of relaxation. Several clinical studies suggested that essential oils particularly Rose, Lavender oil and Frankincense oil when administered to pregnant woman by qualified midwives lowered feelings of anxiety and fear, promoted a sense of well being and reduced the need for pain.

Aromatherapy is one of the fastest growing areas in complementary therapies. Modern interest in Aromatherapy was initiated in France in 1930's. Clinical Aromatherapy is defined as the use of essential oils for their expected outcomes that are measurable. Evidence showed that this was first used by the Chinese, centuries ago to enhance their wellbeing while Egyptians used it for cosmetic, fragrant, medicinal and spiritual purposes. Many Aromatherapies, specifically essential oils, is capable of profound and direct effects on our physical, emotional and energetic bodies.

David Crow stated that in Chinese term, essential oils are medicines for the spiritual essence that resides in the heart and governs consciousness. In Ayurveda terms, (life force) nourish ojas (nutritional/immunological essence) and

brighten tejas (mental luminosity). Essential oils have microscopically small molecules. When essential oils are absorbed through the skin or the mucous membranes of respiratory tract and lungs, they were transferred into the bloodstream. Once the oils are circulating in blood, they really get to work, reducing inflammation, pain, fixing imbalances and fighting infection.

Aromatherapy is a complementary therapy for pain management. It is thought to enhance the parasympathetic response through the effects of touch, smell and encountering relaxation at a deep level. They are increasingly being used to improve the quality of life of patients. Many researchers recommended that Aromatherapy can be used as a complementary and alternative therapy for patients with depression and secondary depressive symptoms arising from various types of chronic medical conditions.

Based on many experimental findings, Aromatherapy can be a useful nursing intervention for arthritis patients and depression among elderly. Many Researches suggested that the patients with cancer, particularly in the palliative care setting are increasingly using Aromatherapy and massage. There is good evidence that these therapies may be helpful for anxiety reduction for short periods, but few studies have looked at the longer term effects.

Milton. S, (2006) had reviewed studies on effects of Aromatherapy on physical and psychological symptoms in patients with advanced cancer. The review was conducted among five electronic data bases that tested the effects of Aromatherapy in the form of therapeutic massage on physical and psychological symptoms in patients with advanced cancer. The results showed that positive effects of Aromatherapy on physical and psychological symptoms in patients with advanced cancer. The study concluded that Aromatherapy can be used as a complementary and alternative therapy for patients with physical and psychological symptoms arising from various types of chronic medical conditions.

The Aromatherapy massage seems to be an alternative method for improving the quality of life among elderly patients. Although physicians have

traditionally relied on pharmacological method to reduce pain in patients undergoing medical procedures, interest in using alternative therapies. Aromatherapy or aromatic medicine is a holistic health therapy.

Aromatherapy stimulates the immune system, strengthens resistance, reduces pain, anxiety, depression and helps to fight against certain diseases. It can also improve blood circulation and lymphatic drainage and it can also be used to treat a cut injury or a minor burn. Potential uses of Aromatherapy in the management of joint pain were explored by using lavender essential oil in many researches and it showed the positive effects among the arthritis patients. From the above information the researcher finds the need of Aromatherapy uses among various clinical conditions. Hence the investigator decided to provide Aromatherapy for joint pain and depression among elderly.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of Aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai.

OBJECTIVES:

1. To assess the pre test level of joint pain among elderly.
2. To assess the pre test level of depression among elderly.
3. To determine the effectiveness of Aromatherapy on joint pain and depression among elderly.
4. To associate the post level of joint pain and depression among elderly with their selected demographic variables.

OPERATIONAL DEFINITION:

Effectiveness: Refers to the desirable outcome of Aromatherapy on joint pain and depression.

Aromatherapy: Refers to the treatment using massage of the fragrance of lavender angustifolia essential oil with carrier oil, for joint pain and depression among elderly.

Joint Pain: Refers to discomfort, aches, and soreness on knee joints.

Depression: Refers to the mood changes associated with slowing of thought.

Elderly: Refers to women those who have the age above 60years.

HYPOTHESIS

There is a significant association between Aromatherapy and joint pain and depression among elderly.

DELIMITATIONS

- ❖ The sample size was delimited to 30.
- ❖ The study duration was delimited to one month.

CHAPTER II

REVIEW OF LITERATURE

The review of literature is an essential aspect of the scientific research. It is a systematic identification, location, scrutiny and summary of written material. That contains information related to the problem under study. The investigator gained insight in selected problem from an extensive review.

This chapter is designed to include the review of literature and the conceptual frame work adopted for the study.

PART I - REVIEW OF RELATED LITERATURE

Aromatherapy is currently used worldwide management of chronic pain, depression, anxiety, some cognitive disorders, insomnia and stress related disorders. Although essential oils have been used, reputedly, effectively, for centuries as a traditional medicine, accumulating evidence that inhaled or dermally applied essential oils enter the blood stream and reducing the joint pain and depression among elderly.

The one of the best complimentary therapy to reduce joint pain and depression is Aromatherapy. The Aromatherapy is not successful in previous years. But it is gradually becoming successful when all came to know its benefits and in reducing the ill effects of the individual.

This chapter is organized systematically and classified in the following manner.

- Literature related to Aromatherapy
- Literature related to Aromatherapy on joint pain
- Literature related to Aromatherapy on depression
- Literature related to Aromatherapy among elderly

PART- II CONCEPTUAL FRAME WORK

PART I

REVIEW OF RELATED LITERATURE

Many elderly people tend to dismiss joint pain and body aches as part of ageing and would rather self medicate or quietly endure the pain. But untreated pain can become chronic and greatly diminish their quality of life. Bone mass or density is lost as people age, especially in women after menopause. The bones lose calcium and other minerals. Due to aging there is Changes in the muscles, joints, and bones affect the posture and gait and lead to weakness, pain and slowed movement.

Depression is a mental health condition. It is a mood disorder in which feelings of sadness, loss, anger or frustration interfere with daily life for weeks or longer. Depression impacts older people differently than younger people. In the elderly, depression often occurs with other medical illness and disabilities and lasts longer. Depression also has been associated with increased risk of death following a heart attack. For that reason, making sure that elderly persons are concerned about is evaluated and treated is important, even if the depression is mild.

There are a wide variety of noninvasive and alternative therapies for the treatment of joint pain and depression. In recent years, there has been a welcome increase in research activity, with both pharmacological and non-pharmacological treatments being trialed. Those with the strongest evidence in the literature for good efficacy and outcomes include exercise therapy, multidisciplinary bio-psychosocial rehabilitation and Aromatherapy massage. Recent research efforts have paid particular attention to physical and psychological interventions with complimentary therapy especially Aromatherapy massage for treatment of joint pain depression.

Literature related to Aromatherapy

Marzouk. T. M, et al., (2013) conducted a study to assess the effect of Aromatherapy abdominal massage on alleviating menstrual pain among nursing students at Mansoura, in Egypt. A randomized crossover design was used for this study. In the first treatment phase, for group one forty three students received

Aromatherapy abdominal massage once daily for seven days prior to menstruation with lavender essential oils. In Group two forty seven students received the same intervention but with almond oil. In the second treatment phase, the two groups switched to alternate regimen. Level and duration of pain and the amount of menstrual bleeding were evaluated at the baseline and after each treatment phase. During both treatment phases, the level and duration of menstrual pain and the amount of menstrual bleeding were significantly lower in the Aromatherapy group than in the placebo group. The study results showed that the Aromatherapy was effective in alleviating menstrual pain, its duration and excessive menstrual bleeding. The study concluded that Aromatherapy can be provided as a non-pharmacological pain relief measure and as a part of nursing care given to girls suffering of dysmenorrhea or excessive menstrual bleeding.

Charati. Y. J, et al., (2012) had conducted a study on the effect of lavender Aromatherapy on pain following needle insertion into a fistula in hemodialysis patients at Mazandaran University, in Iran. Randomized controlled study was used for this study. The sample consists of ninety two patients who were undergoing hemodialysis with arteriovenous fistulas were randomly divided into two groups. The experimental group patients inhaled lavender essence with a concentration of 10% for 5 minutes during 3 hemodialysis sessions and the control group patients received Aromatherapy free of lavender essence. The result showed that the lavender Aromatherapy for the experimental group showed the more significant differences in the change of pain score than the control group. The study concluded that lavender Aromatherapy had positive effective technique to reduce pain following needle insertion into a fistula in hemodialysis patients.

Stea. S, et al., (2012) had done a study to assess the effectiveness of Aromatherapy in surgical patients to treat insomnia, pain and nausea. The Aromatherapy was given for 3 days with lavender, orange and peppermint essential oils. At the end of third day the patients were assessed by the structured interview schedule by the investigator. The result shown that the Aromatherapy have positive efficacy to treat anxiety, nausea and pain respectively. The study concluded that the therapeutic use of essential oils can be performed for surgical patients to treat insomnia, pain and nausea.

Soltani. R, et al., (2011) had done a study on the effect of Aromatherapy with *Lavandula gustifolia* essential oil on post-tonsillectomy pain in pediatrics. In this study, forty eight post-tonsillectomy pediatrics aged 6-12 years were randomly assigned into two groups, 24 pediatrics in each group. After tonsillectomy surgery, all pediatrics received acetaminophen (10-15 mg/kg/dose, PO) every 6 hours as necessary to relieve pain. The pediatrics of the experimental group inhaled lavender essential oil also. The frequencies of daily use of acetaminophen and nocturnal awakening due to pain, and pain intensity (evaluated using visual analog scale [VAS]) were recorded for each patient for 3 days after surgery. Finally, the mean value of variables was compared between two groups separately for each post-operative day. The result showed that the use of lavender essential oil caused statistically significant reduction in daily use of acetaminophen in all three post-operative days than control group and had significant effects on pain intensity and frequency of nocturnal awakening. The study concluded that the Aromatherapy with lavender essential oil decreases the number of required analgesics following tonsillectomy in pediatric patients.

Kristidima. M, et al., (2010) had conducted a randomized controlled study on the effect of lavender scent on dental patient anxiety levels at king's college in London. There were hundred patients level of anxiety was assessed by the modified anxiety scale. In that the patients were randomly divided into two groups. Experimental group received Aromatherapy with odor of lavender and control group received with no odor. The result showed that the lavender group reported significantly lower anxiety than the control group. The study concluded that anxiety about lavender scent reduces the anxiety in dental patients.

Lytle. J, et al., [2010] had conducted a study on effect of lavender Aromatherapy on vital signs and perceived quality of sleep in the intermediate care unit. A randomized controlled study was conducted among fifty patients. In that twenty five patients were in control group and remaining twenty five were in treatment group. Control group patients received usual care and treatment group had 3 ml of 100% pure lavender oil in a glass jar in place at the bedside from 10 pm until 6 am. Vital signs were recorded at intervals throughout the night. Blood pressure

was significantly lower between midnight and 4am in the treatment group not in control group at 6am all patients completed the Richard Campbell Sleep Questionnaire to assess quality of sleep. The results showed that the treatment group had a decrease in blood pressure and the control group had an increase blood pressure and sleep score was higher in the intervention group than in the control group. The study concluded that Lavender Aromatherapy had positive effective on vital signs and way to improve sleep in an intermediate care unit.

Jain. P. K, (2009) conducted a study to assess the effectiveness of Aromatherapy using lavender essential oil on physiological and psychological components at St. John's Medical College Hospital, Bangalore. There were fifty five orthopedics patients were selected for this study. One group pre test post test design used for this study. Purposive sampling technique was chosen for this study. Data were collected using interview schedule record of physiological parameters, state trait anxiety inventory, perceived stress scale and relaxation rating scale. Data were analyzed using range, mean, standard deviation, paired t test, Student's t-test, Mann Whitney test. Results showed that there was a significant reduction in physiological and psychological parameters following Aromatherapy. The study concluded that there was a positive effect of Aromatherapy on physiological and psychological components among orthopedics patients.

John. P. Mathew, (2009) had done a comparative study on effects of Aromatherapy acupressure on hemiplegic shoulder pain and motor power in stroke patient. The aim of the study was to determine the effects of Aromatherapy acupressure, compared to acupressure alone, on hemiplegic shoulder pain and improve motor power in stroke patients. Thirty stroke patients with hemiplegic shoulder pain were used as a sample in this study. The samples randomly divided into two groups. The pain score were markedly reduced Aromatherapy acupressure at post treatment compared than acupressure alone. The result of the study concluded that, Aromatherapy acupressure exert positive effect on hemiplegic shoulder pain, compared to acupressure alone in stoke patients.

Geogyn. L, & Simon. V, (2007) had done a study on the effects of Aromatherapy on stress and anxiety at St. Mary's hospital, South Korea. Quasi experimental design with pre and post test was used for this study. The sample consists of forty long term hospitalized patients. The data were collected by hospital stress and anxiety scale and analyzed using 2 tests Fisher exact test and paired test. The result of Aromatherapy had major effect on decreasing stress and anxiety level. The study concluded that Aromatherapy can be used in nursing intervention for long term hospitalized patients to reduced stress and anxiety.

Harack. J, (2006) conducted a study to assess the effect of Aromatherapy on pain, depression and feelings of satisfaction in life among arthritis patients at Rheumatics Centre, South Korea. Quasi experimental design was used for this study. Forty arthritis patients were enrolled in this study. The essential oils used were lavender, marjoram, eucalyptus, rosemary and pepper mint. The Aromatherapy was given for 10 days. Pre test and post test was done before and after Aromatherapy. The data were collected in the form of pain score and depression score which were analyzed using a 2-test, Fischer's exact test, t-test and paired t-test. The study result showed that Aromatherapy significantly decreased both pain score and depression score. The study concluded that Aromatherapy had positive effects on pain and depression among arthritis patients.

Meesha. S, et al., (2006) conducted a study to evaluate the effect of lavender essence on post cesarean pain. The period of study was 12 months and the sample of the study was used were two hundred term women. There were hundred women in each group was selected. In that hundred women received lavender essence (experimental group) through oxygen mask for 3 minutes and remaining hundred women received (control group) no treatment. The visual analog scale (VAS) was used to analyze the level of post cesarean pain. The result of the study concluded that using lavender essence is a successful and safe complementary therapy in reducing post cesarean pain.

Mathew. L, et al., (2005) conducted a study to assess the use of Aromatherapy with hospice patients to decrease pain, anxiety, depression and vital

signs at Las Vegas, in USA. The study measured that the responses of seventeen cancer hospice patients on lavender Aromatherapy. The duration of Aromatherapy was given thrice in a week for two weeks. Anxiety, depression, and vital signs as well as levels of pain were assessed by using 11-point verbal analogue scale. Results reflected a positive change in Blood pressure and pulse, reduction in pain, anxiety and depression after lavender Aromatherapy. The study concluded that there was positive improvement in vital signs, depression, pain and anxiety levels among hospice patients.

Cornwell. S, et al., (2004) conducted a study to assess the aroma oil massage with lavender and rose oil for primary dysmenorrhea among adolescent girls at Hinchingsbrooke Hospital at England. Thirty adolescent girls were selected for this study. The aroma oil massage was given for 5 days prior to menstruation. The pain was assessed by universal pain scale before and after massage every day. The study results shown that the positive effects of lavender aroma oil massage on dysmenorrhea. The study concluded that the lavender with rose aroma oil massage can be treated dysmenorrheal among adolescent girls.

Lee. I. S, (2004) done study on effects of lavender Aromatherapy on insomnia in women college students at Korea. This study comprises of forty Women College students with insomnia. One group pre test post test design was chosen for this study. They underwent lavender Aromatherapy massage for 4 weeks. The study results showed that Aromatherapy was positive effect on insomnia. The study concluded that the lavender oil Aromatherapy has beneficial effect on insomnia among women college students with insomnia and depression.

Soden. K, et al., (2004) had conducted a randomized control study on effectiveness of Aromatherapy massage in a hospice setting. This study was designed to compare the effects of Four week courses of Aromatherapy massage and massage on physical and psychological symptoms in patient with advanced cancer. There were forty two patients were randomly allocated to receive weekly massages. Forty two patients were allocated for massage with lavender essential oil (Aromatherapy group) carrier oil only (massage) or no intervention. The study

outcome measured by visual analogue scale (VAS), Hospital anxiety and depression scale (HAD) and Rotterdam symptom checklist (RSCL). The result showed that there was significant reduction in depression score in Aromatherapy massage group. The study concluded that patients with high levels of psychological distress respond best to Aromatherapy massage.

Literature related to Aromatherapy on joint pain

Tekur. P, et al., (2013) done a study on effect of Aromatherapy massage on joint pain among elderly at orthopedic centre, in Japan. There were thirty elderly women were selected as sample and Aromatherapy massage was performed twice a week for a total of eight times. The questionnaire and measurement of stress marker levels were assessed before and after the first, fifth and eighth Aromatherapy massages. The study results showed that the Aromatherapy massage decreases joint pain among elderly women. The study concluded that there was positive effective in reduction of joint pain among elderly patients.

Yip. Y. B, & Tam. A. C, (2008) conducted an experimental study on the effectiveness of massage with ginger and orange essential oil for moderate to severe knee joint pain among the elderly at Japan. There were fifty nine older patients enrolled placebo-controlled experimental group. The experimental group received 6 massage sessions with ginger and orange oil over 3 week period. Placebo control group received massage with olive oil and the control group received no massage. Post assessment done after the last massage session. The study concluded that the aroma massage therapy as an alternative method for short-term knee joint pain relief.

Yungsu. Y, et al., (2008) had done a study to determine the effectiveness of massage with aromatic essential oil on joint pain for senior citizens, at Hong Kong. Fifty senior citizens were selected for this study. One group pre test post test design used for this study. There were six massage sessions done with ginger and orange oil for 3 weeks. The level of pain score evaluated by Universal pain assessment scale after 3 weeks. The result showed that there were significant changes in joint pain score. The study revealed that aroma massage can be used as an alternative method for joint pain among senior citizens.

Taehan. K. E, & Hakhoe. L, (2006) was conducted a study on the effectiveness of massage with aromatic essential oils for joint pain among elderly women at community center for senior citizen, Taiwan. The study was done to know the efficacy of aromatic essential oil. There were fifty elderly women were enrolled in this study. Quasi experimental design chosen for this study. Experimental group were received six massage sessions with aromatic oil for 3 weeks and control group did not received any type of intervention. The study result shows that there were significant changes in joint pain score. The study concluded that massage with aromatic essential oil can be used to relief joint pain among elderly.

Kim. M. J, et al., (2005) had done a study to assess the effectiveness of aroma therapy on joint pain, depression on arthritis patients at college of nursing, Catholic University, Korea. Quasi experimental design was used for this study. There were forty arthritis patients selected for this study. The Lavender essential oil was used for Aromatherapy massage. The study results showed that the Aromatherapy significantly decreased both joint pain and depression score of the experimental group than the control group. The study concluded that the Aromatherapy had major effect on decreasing joint pain and depression levels among arthritis patients.

Shelkin. U, et al., (2005) conducted a comparative study on the effects of essential oils on joint pain among arthritis patients. The sample consists of ninety arthritis patients. Randomly thirty samples were taken into three groups. One group received massage with lavender oil. Second group received massage alone and third rested without any massage. In this study, data obtained by using pain questionnaire to document pain. The result of the study revealed that 70% of joint pain was reduced with lavender oil massage compare than other two groups. The study concluded that there was a significant reduction in joint pain among first group with lavender oil massage.

Shirreffs. C. M, (2001) conducted a study on effects of Aromatherapy massage for joint pain and constipation with GuillianBarré syndrome at St Vincent's Hospital in Australia. Quasi experimental design was chosen for this study. Ten

patients were selected and Aromatherapy massage was given for 7days. Post test was done after the last day of massage. The result showed that the positive outcome of Aromatherapy massage. The study concluded that the Aromatherapy massage had positive effects on joint pain and constipation with GuillianBarré Syndrome.

Literature related to Aromatherapy on depression

Yim. V. W, et al., (2009) had reviewed studies on effects of Aromatherapy for patients with depressive symptoms. The review was conducted among five electronic data bases that tested the effects of Aromatherapy in the form of therapeutic massage for patients with depressive symptoms. The results showed that positive effects of Aromatherapy on depressive symptoms in patients with depression and cancer. The study concluded that Aromatherapy could continue to be used as a complementary and alternative therapy for patients with depression and secondary depressive symptoms arising from various types of chronic medical conditions.

Chang. S. Y, (2008) had conducted a study on effect of aroma hand massage on pain, anxiety and depression in hospice patients with terminal cancer at keiyung University, Korea. This study comprises of fifty eight hospice patients. In that thirty hospice patients were assigned to the control group and remaining twenty eight patients were assigned to the experimental group. In experimental group twenty eight patients went on aroma hand massage for 5 minutes for 7 days with lavender oil and the control group went on general hand massage. The study results showed that the aroma hand massage for the experimental group showed more significant differences in the change of pain score and depression than the control group. This study concluded that aroma hand massage had a positive effect on pain and depression in hospice patients with terminal cancer.

Edge. J, (2008) had conducted a study to assess the effect of Aromatherapy massage on depression, anxiety and relaxation among chemotherapy patients at Lavender Day Hospital in UK. This study was carried out with eight patients were specifically referred for Aromatherapy each received Aromatherapy

massage weekly for 6 weeks. The patient level of anxiety and depression were measured using the Hospital Anxiety and Depression (HAD) Scale and visual analogue scale prior to the first massage and after the final massage. The levels of depression, anxiety and relaxation were recorded using a visual analogue scale before and 6 weeks after last massage. The result Improvements had shown that in six out of eight chemotherapy patients. The study concluded that Aromatherapy reduces the level of anxiety and depression level among chemotherapy patients.

Rho. K. H, et al., (2005) conducted a study on the effects of Aromatherapy massage on the anxiety and depression elderly women at community centre in Korea. A quasi-experimental control group, pre test post test design was used for this study. The subjects comprised forty elderly females. In that twenty were in the experimental group and remaining twenty were in the control group. Aromatherapy massage using with chamomile, rosemary and lemon was given to the experimental group only. Each massage session lasted 20 minutes and was performed thrice in a week for two week periods. The intervention result showed that the significant differences in the anxiety and depression. This study suggested that Aromatherapy massage exerts positive effects on anxiety and depression among elderly.

Louis. M, & Kowalski. D.S, (2002) had conducted a study to assess the effectiveness of use of Aromatherapy with hospice patient to decrease pain, anxiety and depression and to promote increase sense of wellbeing. The study was conducted in department of nursing, University of Nevad, at USA. This study was conducted among twenty hospice cancer patients. In that ten patients were assigned into control group and remaining ten were in experimental group. Each patient was measured on 3 different days before and after 60 minute session consisting of water humidification (control group), 3% lavender Aromatherapy (intervention group). This study results showed that Aromatherapy reflected a positive change in pain, anxiety, depression and sense of wellbeing in experimental group than in control group.

Literature related to Aromatherapy among elderly

Cino. K, et al., (2014) conducted a study on Aromatherapy Hand Massage for Older Adults with Chronic Pain Living in Long Term Care. A Prospective randomized control trial study compared the effect of Aromatherapy hand massage, hand massage without Aromatherapy on chronic pain. Chronic pain was measured with the Geriatric Multidimensional Inventory Pain scores. They samples recruited from seven long-term care facilities and Aromatherapy massage given twice weekly for 4 weeks. The results showed that a hand massage with Aromatherapy significantly decreased chronic pain than hand massage without Aromatherapy. The study concluded that the Aromatherapy hand massage was effective for older adults with Chronic Pain Living in Long Term Care.

Howdysell. C, (2008) conducted a study to assess the effects of Aromatherapy massage on chronic pain for geriatric and hospice patients at OHIO University in USA. Randomized control study was chosen for this study. In that fifty patients were selected in this study. In that twenty five patients were assigned in experimental group and twenty five were assigned in control group. Experimental group underwent for 6 massage sessions in alternative days for 2 weeks. Pain was assessed by Visual analogue scale for both groups in experimental group the level of pain assessed by before and after massage. The study results showed that the level of pain was reduced in experimental group than control group. So that the study concluded that Aromatherapy massage have more effects on chronic pain among geriatric and hospice patients.

Kubo. C, et al., (2003) had done a study to assess the effects of Aromatherapy on psychological stress among elderly women patients under long-term hospitalization at nursing home in Japan. Quasi experimental design was selected for this study. Aromatherapy inhaled twice a week for a total of eight times. Questionnaire and measurement of stress marker levels (salivary amylase activity) before and after the first, fifth and eighth Aromatherapy were done to the patient. The result showed that decreased level in stress after Aromatherapy compared to before Aromatherapy. The study concluded that the Aromatherapy had proven positive effective in reducing psychological stress among elderly patients under long-term hospitalization.

PART II

CONCEPTUAL FRAME WORK

The development of conceptual model is a fundamental process required before conducting a research. The frame work influences each state of research process. The conceptual frame work in nursing research can help to provide clear concise idea knowledge about research. The conceptual model is made up of concepts which are the mental images of phenomenon. These concepts are linked together to express their relationship between them. It provides the guideline to attain the objectives of the study based on the theory.

It is schematic representation of the steps, activities and outcome of the study. The conceptual framework for this study was based on modification made on Roy's adaptation model (1976). Roy's adaptation model is characterized as a system theory with a strong analysis of interaction. Roy considers the recipient of care to be an open, adaptive system. It's react and interact with other system in the environment.

The investigator applied the Roy's adaptation theory aimed to assess the effectiveness of Aromatherapy on joint pain and depression among elderly. In this theory three major components are emphasized. It employs a feedback cycle of Input, Throughput and Output.

Input

Input is identified as stimuli which can come from the environment or within a person. Stimuli are classified as

- Focal stimuli
- Contextual stimuli
- Residual stimuli

Focal internal stimuli

Focal internal stimuli are that immediately confront the individual in a particular situation. In this study, focal internal stimuli are elderly who had joint pain and depression.

Focal external stimuli

Focal external stimuli are those stimuli which are present around the elderly. Patients have worries regarding their future life and isolated from house.

Contextual stimuli

Contextual stimuli are those other stimuli that influence the situation which include demographic variables of patients such as age, marital status, religion, education, number of children, duration of stay in old age home and co-morbid illness.

Residual stimuli

It refers to non specific stimuli such as pain, fear, death and illness.

Throughput

Throughput makes use of a person's processes and effectors. Processes determine the level of joint pain and depression experienced by the elderly. Effectors which determine pre test level of the joint pain and depression by using short form of geriatric depression scale and universal pain assessment scale. Aromatherapy was given to the elderly for 15-20 minutes in every day. It is useful to reduce joint pain and depression

Output

Output is the outcome of the system. When the system is a person, output refers to the person's behavior, it refers to reduction of joint pain and depression behavior by adapting Aromatherapy technique. This output represent given feedback for this system. In this study output is measured by the interview schedule on joint pain and depression among elderly. If joint pain and depression is not reducing reassessment should be done. So the investigator has selected the Modified Roy's adaptation model for this study.

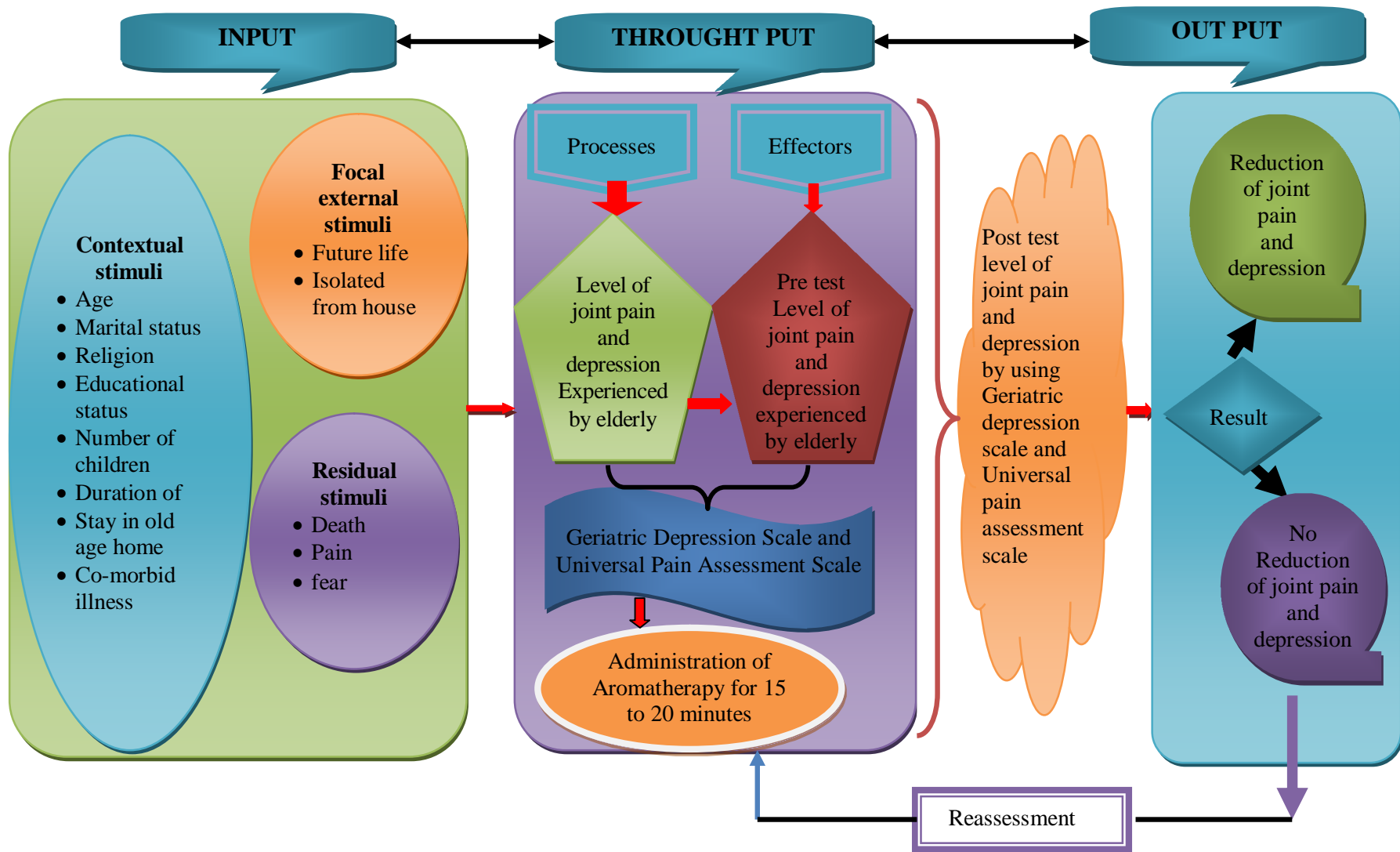


Fig 1: MODIFIED ROY'S ADAPTATION MODEL (1976)

CHAPTER III

METHODOLOGY

Methodology entails investigations of the methods of obtaining and organizing data and conducting rigorous research. It addresses the development, validation and evaluation of research tools or methods. (Polit 2010)

This chapter deals with a brief description of methodology adopted by the researcher. It includes research approach, research design, and variables, setting of the study, population, sample and sample size, sampling techniques, description of instruments and data collection procedure.

RESEARCH APPROACH

Quantitative research approach was used to assess the effectiveness of Aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai.

RESEARCH DESIGN

A pre experimental one group pre test post test design was chosen for this study.

RESEARCH VARIABLES

Independent variables: It refers to Aromatherapy on joint pain and depression.

Dependent variables: It refers to joint pain and depression among elderly.

SETTING OF THE STUDY

This study was conducted in Little drops home for aged destitute in paraniputhur, at Chennai. This consists of 200 beds for the elderly men and women

with adequate facilities and medical supplies. The old age home consist of Elpage ward, Anthony ward, Japan ward, phone block, Cinthiya I ward, Cinthiya II ward, Palliative ward, Mahadeven ward, Male ward, female ward and separate wards available for men and women. There are 175 elderly were staying in the home. Especially around 30 of them were suffered with joint pain and depression and also interested to participate in Aromatherapy.

POPULATION

Population of the study includes the elderly women who had joint pain and depression in Little drops home for aged destitute at Chennai.

SAMPLE

Sample for the study was elderly women who had joint pain, depression and who fulfilled the inclusion criteria were selected.

SAMPLE SIZE

The study sample comprises of 30 elderly women who had joint pain and depression in Little drops home for aged destitute, at Chennai.

SAMPLING TECHNIQUE

Purposive sampling technique was used to select the samples among elderly with joint pain and depression in Little drops home for aged destitute, at Chennai.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria:

- Elderly women who had knee joint pain.
- Elderly women who had depression on assessment.

- Elderly who were in the age group of 60-80 years.
- Elderly who were willing to participate in the study.

Exclusion criteria:

- Elderly who had received analgesics.
- Elderly who got injuries or deformities of joints.
- Elderly with history of nasal allergy and Sinusitis.

DESCRIPTION OF THE INSTRUMENTS

The tool was prepared to assess the effectiveness of Aromatherapy on joint pain and depression among elderly. It was developed after the literature review and guidance from experts. The tool consists of four parts,

Part- I

It consists of demographic variables like age, marital status, religion, educational status, number of children, duration of stay and co-morbid illness.

Part- II

It consists of universal pain assessment scale to measure the level of joint pain among elderly.

Scoring interpreted as follows:

- | | | |
|------|---|-----------|
| 0 | - | none |
| 1-2 | - | mild pain |
| 4-6 | - | moderate |
| 7-10 | - | severe |

Part-III

It consists of Short Form of Geriatric depression scale. The Geriatric Depression Scale (GDS), first created by Sheikh & Yesavage and Short Form GDS consisting of 15 questions was developed in 1986. Short Form of Geriatric depression scale consists of 15 items, in that 10 indicated the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered negatively. Scores of 0-4 are considered normal, 5-8 indicate mild depression; 9-11 indicate moderate depression and 12-15 indicate severe depression. Patients were asked to choose one response from the yes/no type questionnaire. Instruct the patient to answer how it currently describes their feelings.

Scoring interpreted as follows:

- 0-4 - Normal
- 5-8 - mild depression.
- 9-11 - moderate level of depression.
- 12-15 - severe level of depression.

Part –IV

Aromatherapy is the use of essential oils from plants. Aromatherapy massage done with lavender essential oil along with carrier oil on knee joint in reducing joint pain and depression. This therapy was providing for daily 15-20 minutes for 10 days. It absorbed through skin and improves blood circulation, lymphatic drainage, enhance mood and promote a sense of relaxation and wellbeing.

VALIDITY

The content validity of the tool was validated by experts from the field of Aromatherapy graduate. The tool was used after consulting with the experts.

RELIABILITY

Reliability of the tool was established by using test retest method. The reliability score obtained was $r = 0.86$ and 0.80 , which showed that the tool was reliable for conducting the study.

ETHICAL CONSIDERATION

The study was conducted after the approval of dissertation committee. A formal permission was obtained from the medical officer in Little drops home for aged destitute at Chennai.

Elderly who were suffered with joint pain and depression were clearly explained about the study purpose and procedures. The formal written consent was obtained from the samples. The usual assurance of anonymity and confidentiality was obtained.

PILOT STUDY

The pilot study was conducted to test the feasibility appropriateness and practicability. The pilot study was conducted among 3 elderly in Little drops home for aged destitute in Paraniputhur, at Chennai from the duration of 09.05.2014 to 18.05.2014. A formal permission was obtained from the higher authorities and also obtained the written consent from the patients. The participants were selected by purposive sampling method.

A brief introduction was given about the purpose of the study and procedure explained to the patients. The pre test was conducted by using the universal pain assessment scale and short form of geriatric depression scale for 15 minutes to each patient. The Aromatherapy was given by investigator from 09.05.14 to 18.05.14 for every day 15 to 20 minutes in the duration of 10 days. Then the investigator assessed the effectiveness of Aromatherapy on the last day of intervention.

The result of the study showed that Aromatherapy was effective to reduce the joint pain and depression among elderly. The study was feasible. The tool used in pilot study was used in main study.

DATA COLLECTION PROCEDURE

The permission obtained from Little drops home for aged destitute at Chennai for data collection. The study carried out with total of 30 elderly, who fulfilled the inclusion criteria. The investigator obtained written consent from each participant. The investigator introduced herself to the elderly and explained the purpose of the study to ensure better co-operation and collected the data from the samples on one to one basis. The data collection procedure was scheduled from 19.05.14 to 19.06.14.

About 40 elderly were assessed for joint pain and depression among them 30 were selected based on the availability of samples. Thirty elderly were divided into three batches. Each batch consists of 10 elderly women. Universal pain assessment scale and short form of geriatric depression scale was used to assess the pre test level of joint pain and depression among elderly on the first day.

After the pre test, Aromatherapy massage was given by investigator for 15 to 20 minutes per day for the duration of 10 days for each batch. The investigator was conducted the post test on the last day of the intervention for each batch using the same tool.

DATA ANALYSIS

The data obtained and analyzed by using both descriptive and inferential statistics. Demographic variables of elderly analyzed in terms of frequency and percentage distribution. Mean and standard deviation was used to compare pre test and post test level of joint pain and depression among elderly. Paired 't' test was used to evaluate the effectiveness of Aromatherapy on joint pain and depression among elderly. Chi square test used to associate the pre test and post test levels of joint pain and depression with their selected demographic variables.

**A STUDY TO ASSESS THE EFFECTIVENESS OF AROMATHERPY ON
JOINT PAIN AND DEPRESSION AMONG ELDERLY**

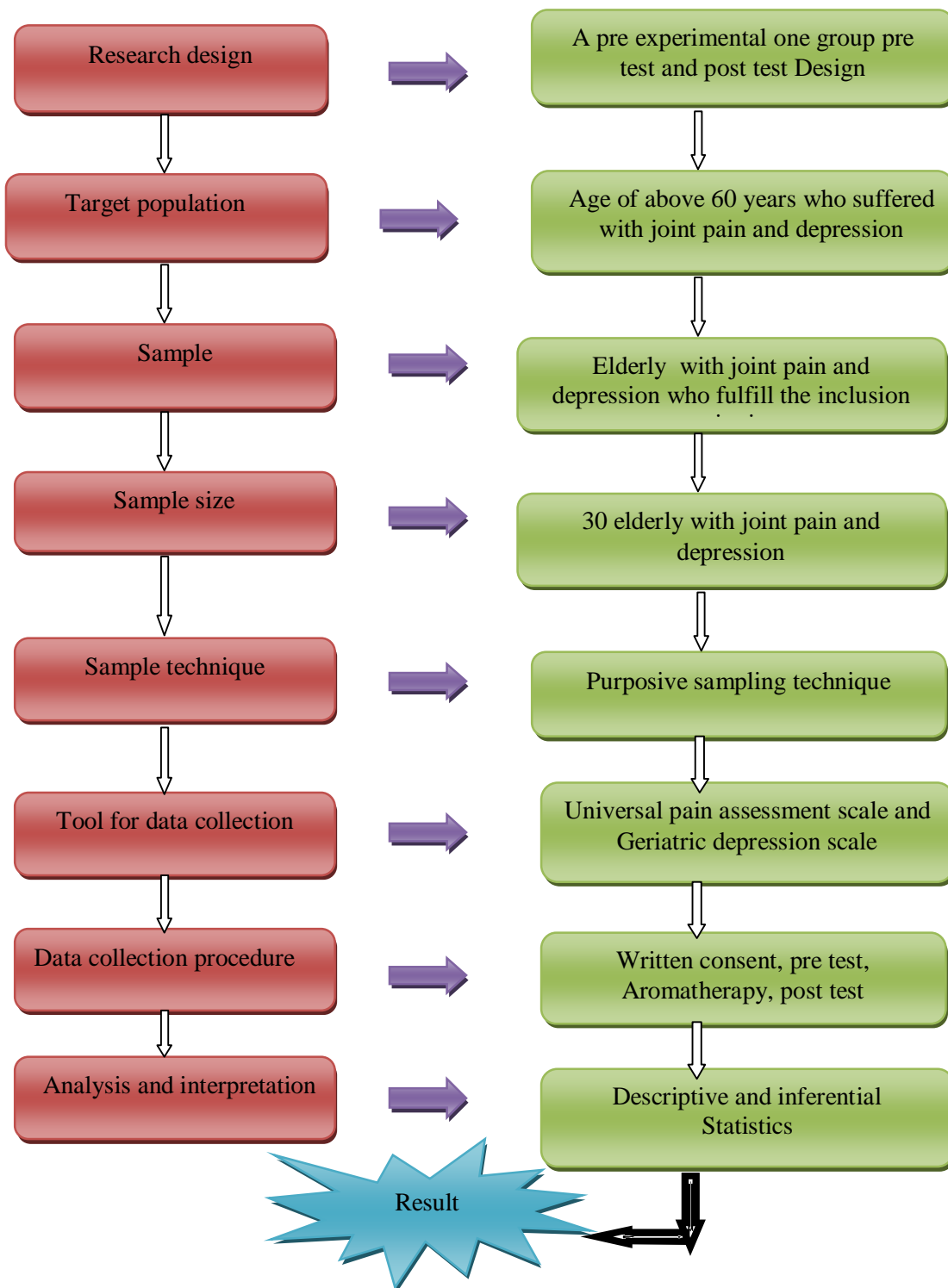


Fig 2: Schematic representation of research methodology adapted in this study

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of the study subjects, classification, analysis and interpretation of data collected to study to assess the effectiveness of Aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai.

Abdellah and Levin (1979) have stated that interpretation of tabulated data can bring to light the real meaning of the study. Data collected to assess the effectiveness of Aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai. The collected data was analyzed based on objectives and hypothesis of the study. The findings based on the descriptive and inferential statistical analyses which presented under the following sections:

- Section A:** Frequency and percentage distribution of demographic variables among elderly with joint pain and depression.
- Section B:** Frequency and percentage distribution of pre test and post test level of joint pain among elderly.
- Section C:** Frequency and percentage distribution of pre test and post test level of depression among elderly.
- Section D:** Comparison of mean and standard deviation between pre test and post test level of joint pain among elderly.
- Section E:** Comparison of mean and standard deviation between pre test and post test level of depression among elderly.
- Section F:** Association of pre test and post test level of joint pain and depression among elderly with their demographic variables

SECTION-A

Table 1: Frequency and percentage distribution of demographic variables among elderly**N = 30**

S.No	Demographic Variables	Frequency	Percentage
1.	Age in years		
	60 - 70	14	46.67
	71 - 80	11	36.67
	81 – 90	5	16.66
2.	Marital Status		
	Married	2	6.67
	Unmarried	6	20.00
	Divorcee	4	13.33
	Widower	18	60.00
3.	Religion		
	Hindu	13	43.33
	Christian	14	46.67
	Muslim	3	10.00
	Others	0	0.00
4.	Educational Status		
	No formal education	5	16.67
	School education	22	73.33
	Graduates	3	10.00
5.	Number of Children		
	None	9	30.00
	1 to3	14	46.67
	4 to 6	5	16.67
	>6	2	6.66
6.	Duration of stay at old age home		
	<1 year	4	13.33
	1 - 3 year	7	23.33
	3 - 5 year	8	26.67
	>5 year	11	36.67
7.	Co-morbid illness		
	Diabetes Mellitus	9	30.00
	Hypertension	7	23.33
	Diabetes & Hypertension	4	13.33
	Others	7	23.33
	None	3	10.01

Table 1 represents the frequency and percentage distribution of demographic variables among elderly with joint pain and depression. In regard to the age 14 (46.67%) elderly were in the age group of 60-70 years, 11 (36.67%) elderly were in the age group of 71-80 years, 5 (16.66%) elderly were in the age group of above 81-90 years. In considering the marital status 2 (6.67%) were married, 6 (20.0%) were unmarried and 4 (13.33%) were divorcee and 18 (60.0%) were widower.

In regard to the religion 13 (43.33%) were belongs to Hindu, 14 (46.67%) were belongs to Christian and 3 (10.0%) were Muslims and no one belongs to other category. With regard to educational status 5 (16.67%) had no formal education, 22 (73.33%) completed school education and 3 (10.0%) completed graduate.

In considering the number of children 9 (30.0%) of them were don't have children, 14 (46.67%) have 1-3 children, 5 (16.67%) have 4-6 children and 2 (6.66%) have children more than 6. In accordance with duration in home 4 (13.3%) were staying less than 1 year, 7 (23.3%) were staying between 1- 3 years, 8 (26.67%) were 3-5 years and 11 (36.67%) staying more than 5years. In regard to Co-morbid illness 9 (30.0%) of them having Diabetes Mellitus, 7 (23.3%) of them having hypertension, 4 (13.33%) having both diabetes and hypertension, 7 (23.3%) have other diseases and 3 (10.01%) have none of above mentioned.

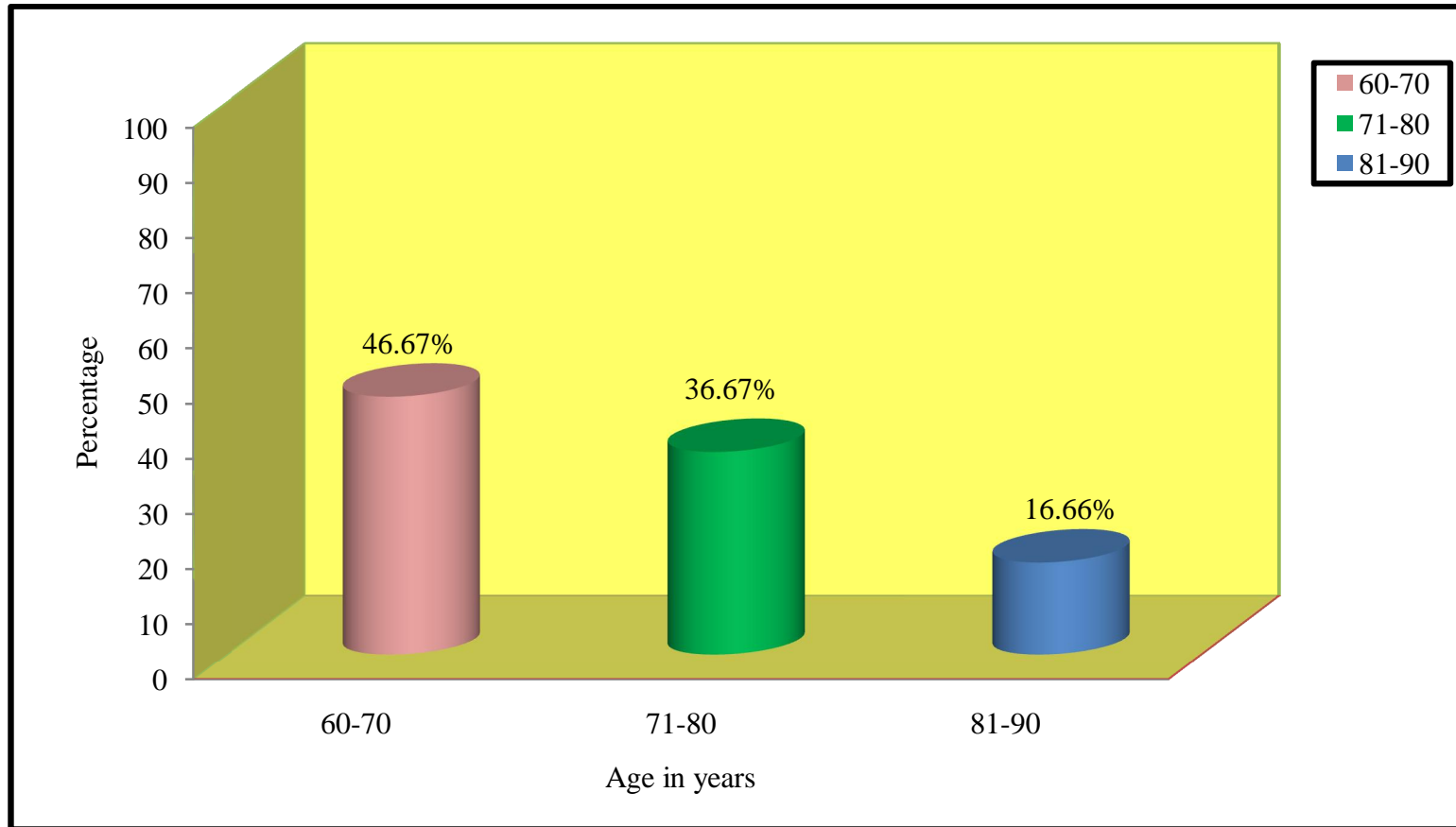


Fig.3: Percentage distribution of age among elderly

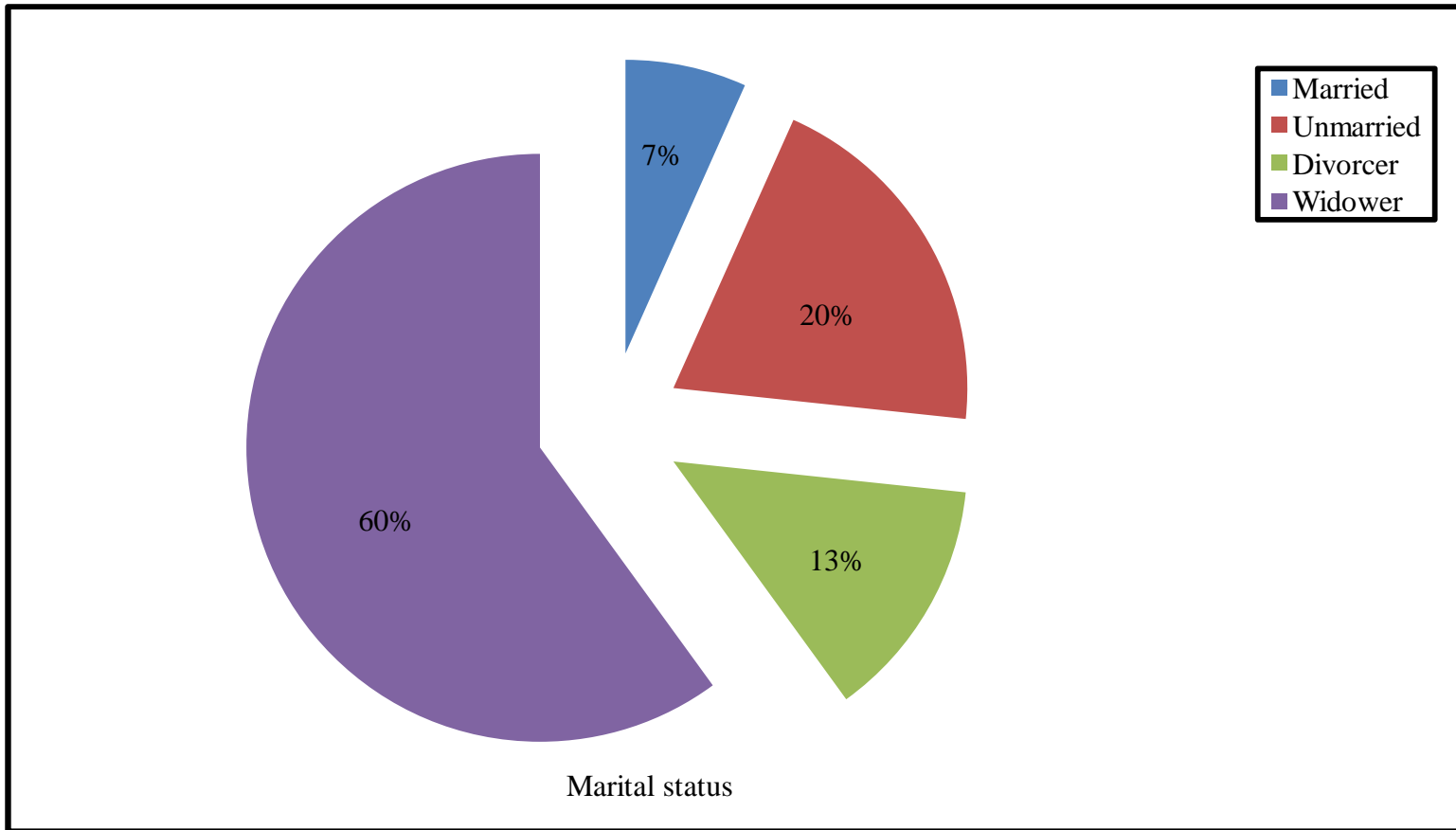


Fig.4: Percentage distribution of marital status among elderly

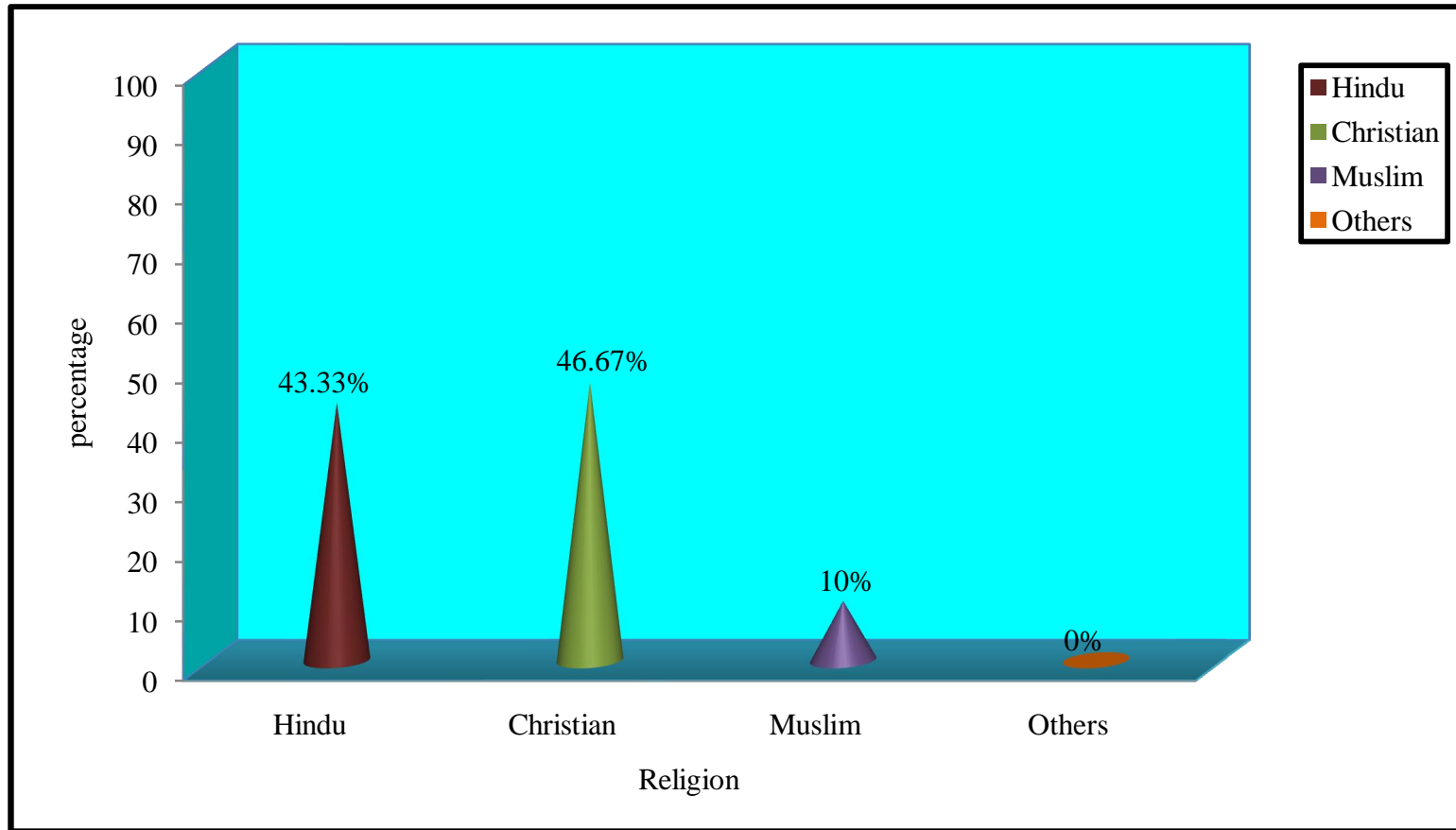


Fig.5: Percentage distribution of religion among elderly

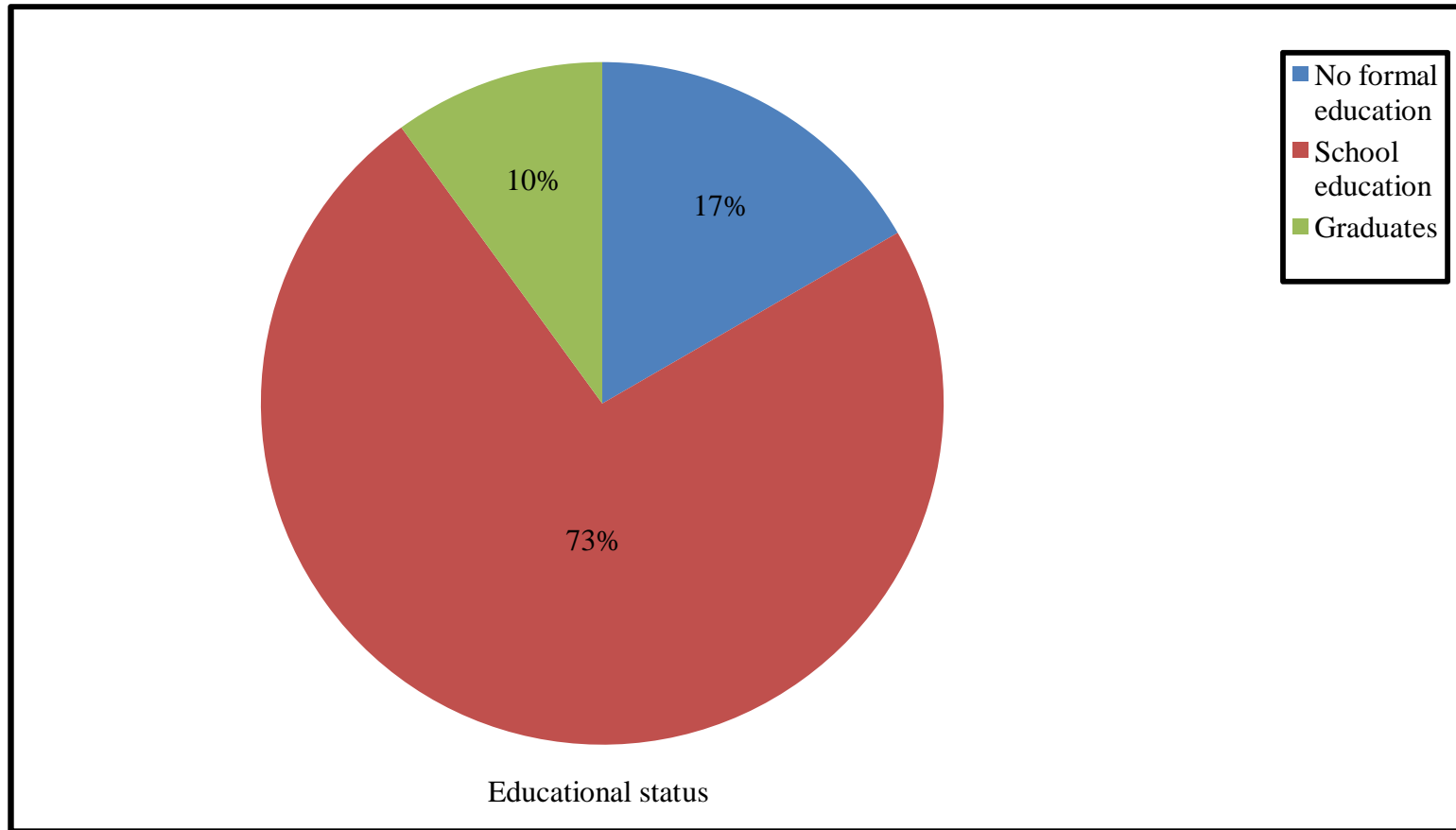


Fig.6: Percentage distribution of educational status among elderly

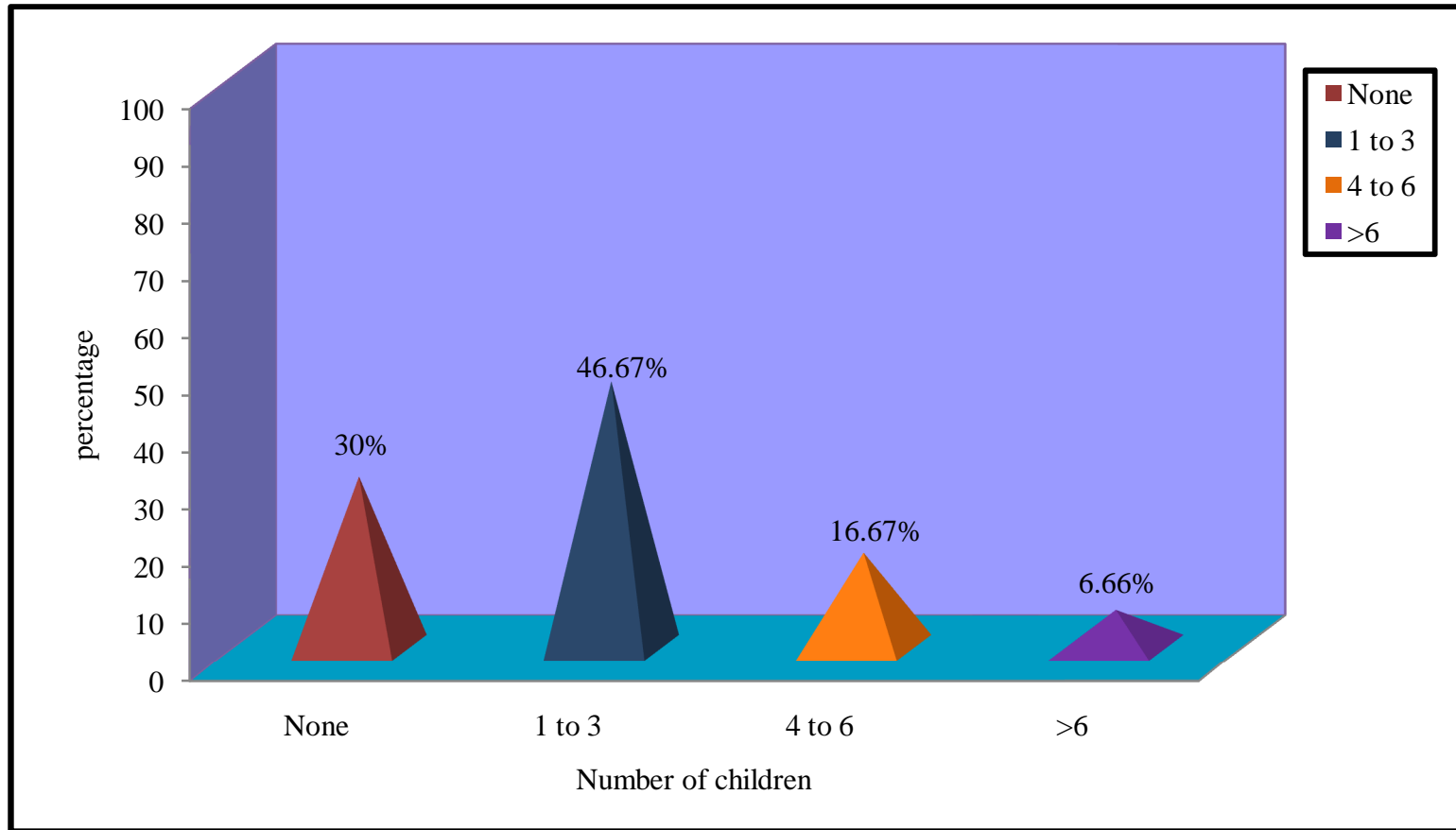


Fig.7: Percentage distribution of number of children among elderly

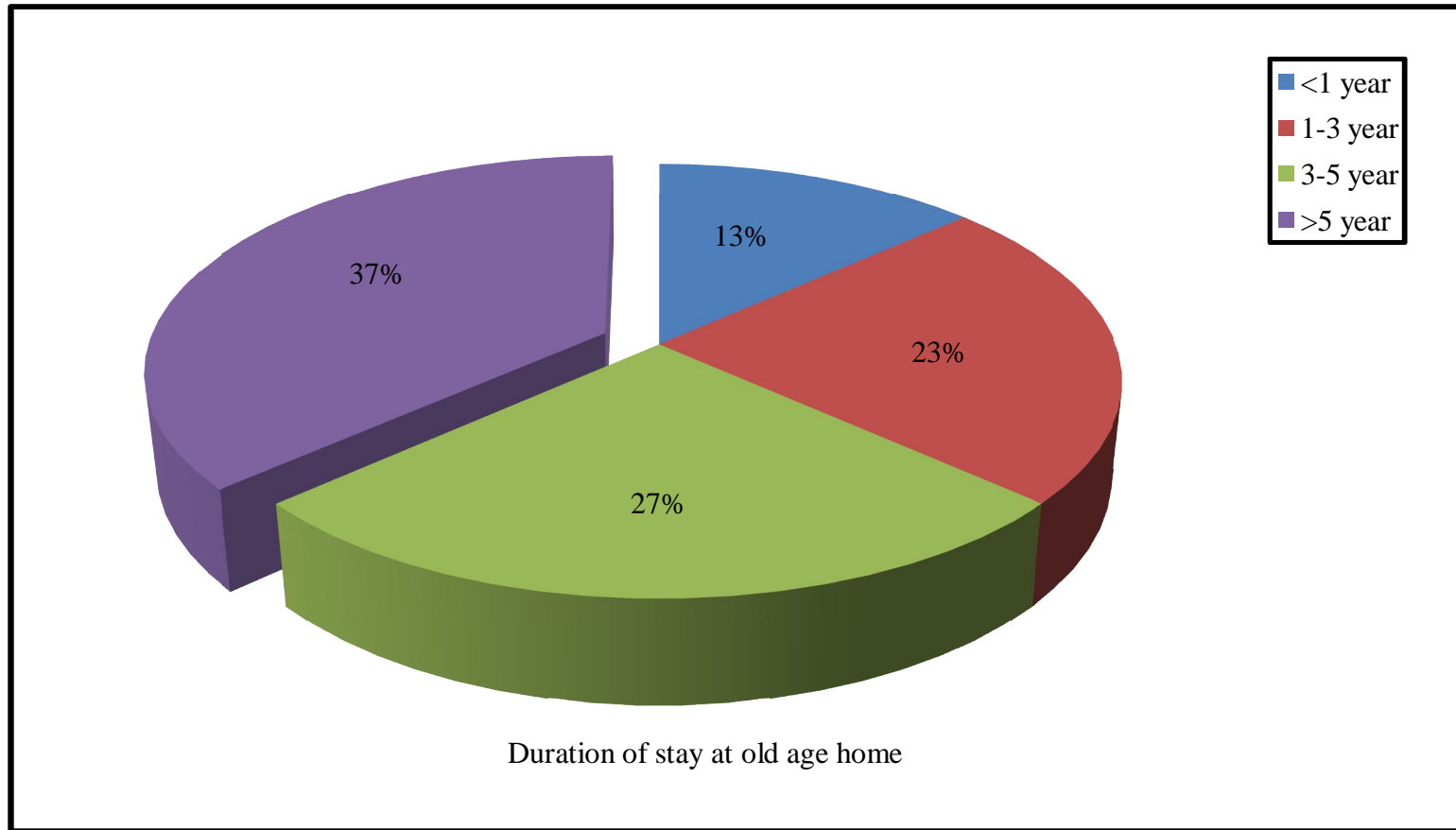


Fig.8: Percentage distribution of duration of stay at old age home among elderly

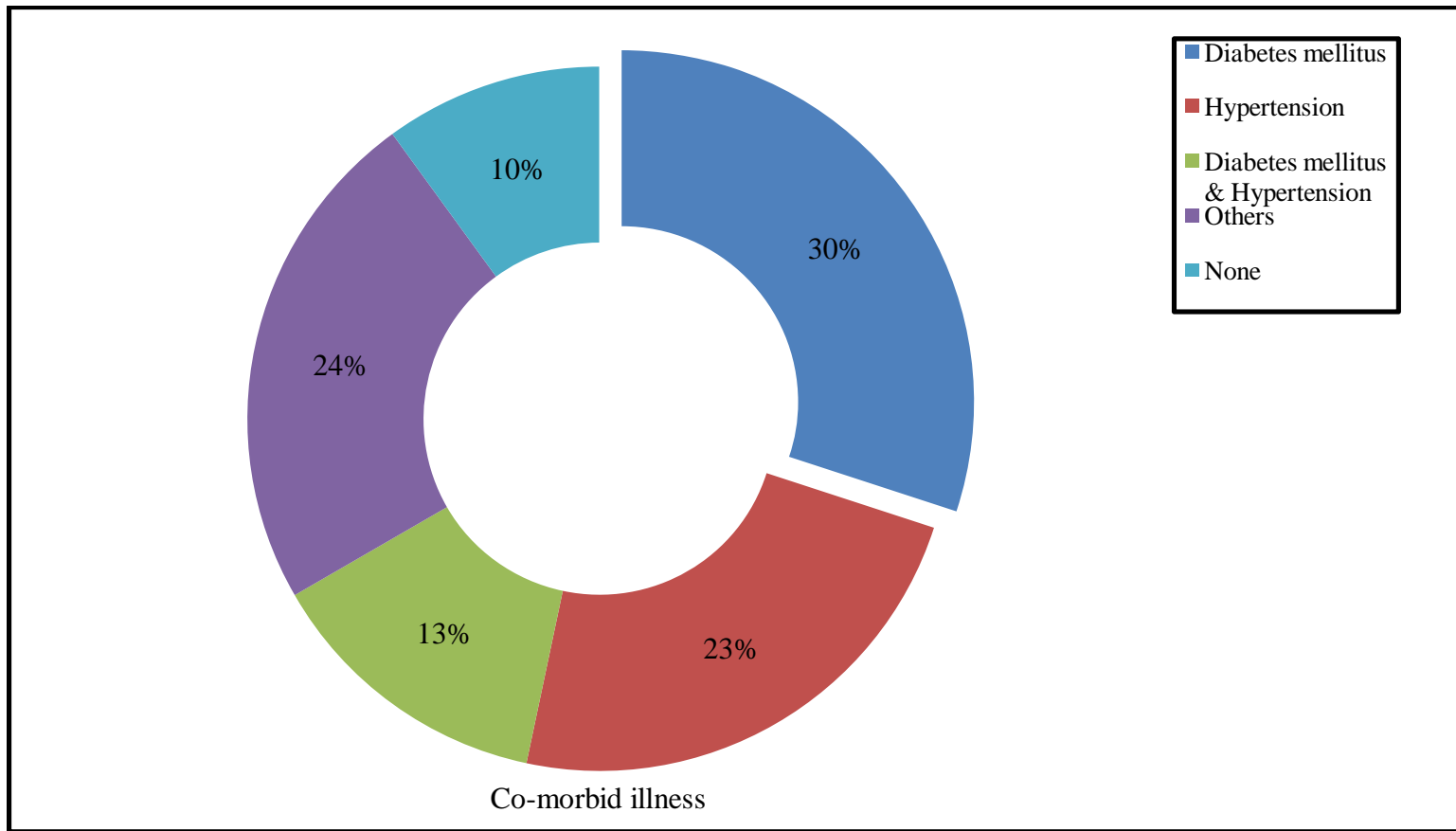


Fig.9: Percentage distribution of co-morbid illness among elderly

SECTION-B

Table 2: Frequency and percentage distribution of pre test and post test level of joint pain among elderly

N = 30

Level of joint pain	No Pain		Mild Pain		Moderate Pain		Severe Pain	
	No.	%	No.	%	No.	%	No.	%
Pre test	0	0	1	3.33	17	56.67	12	40.0
Post Test	3	10.0	20	66.67	7	23.33	0	0

Table 2 represents the frequency and percentage distribution of pre test and post test level of joint pain among elderly. In pre test 1 (3.33%) elderly had mild joint pain, 17 (56.67%) had moderate joint pain and 12 (40.0%) elderly had severe joint pain and none of them had no pain. In post test level of joint pain 3 (10.0%) elderly had no joint pain, 20 (66.67%) had mild joint pain, and 7 (23.3%) elderly had moderate joint pain and none of them perceived severe joint pain.

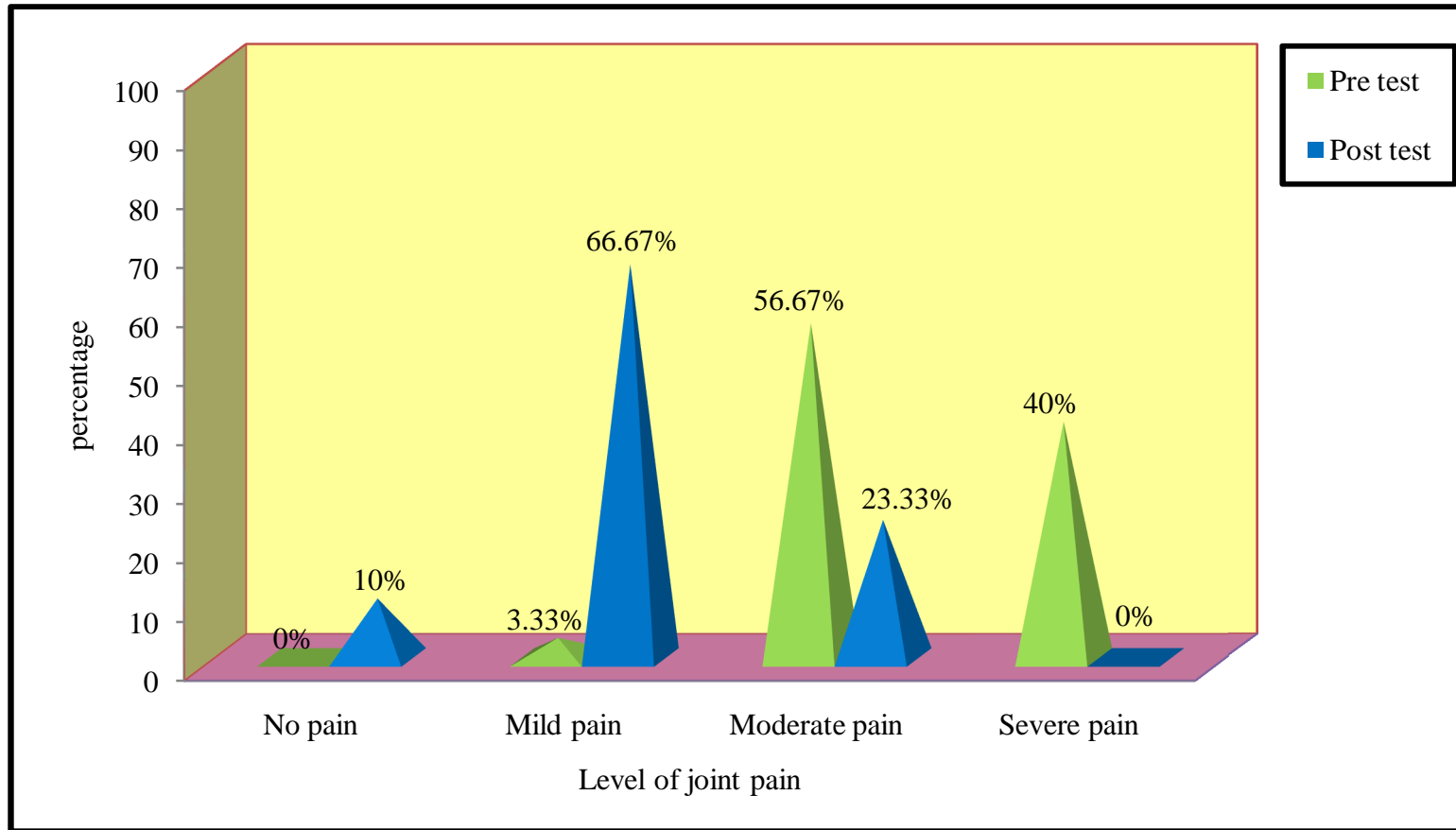


Fig.10: Percentage distribution of pre test and post test level of joint pain among elderly

SECTION-C

Table 3 : Frequency and percentage distribution of pre test and post test level of depression among elderly

N = 30

Level of depression	Normal		Mild		Moderate		Severe	
	No.	%	No.	%	No.	%	No.	%
Pre test	0	0	1	3.33	19	63.34	10	33.33
Post Test	0	0	23	76.67	7	23.33	0	0

Table 3 represents the frequency and percentage distribution of pre test and post test level of depression elderly. In pre test 1 (3.33%) elderly had mild depression, 19 (63.34%) had moderate depression and 10 (33.33%) elderly had severe depression and none of them had no depression. In post test level of depression 23 (76.67%) elderly had mild depression, 7 (23.3%) had moderate depression and none of them had severe depression.

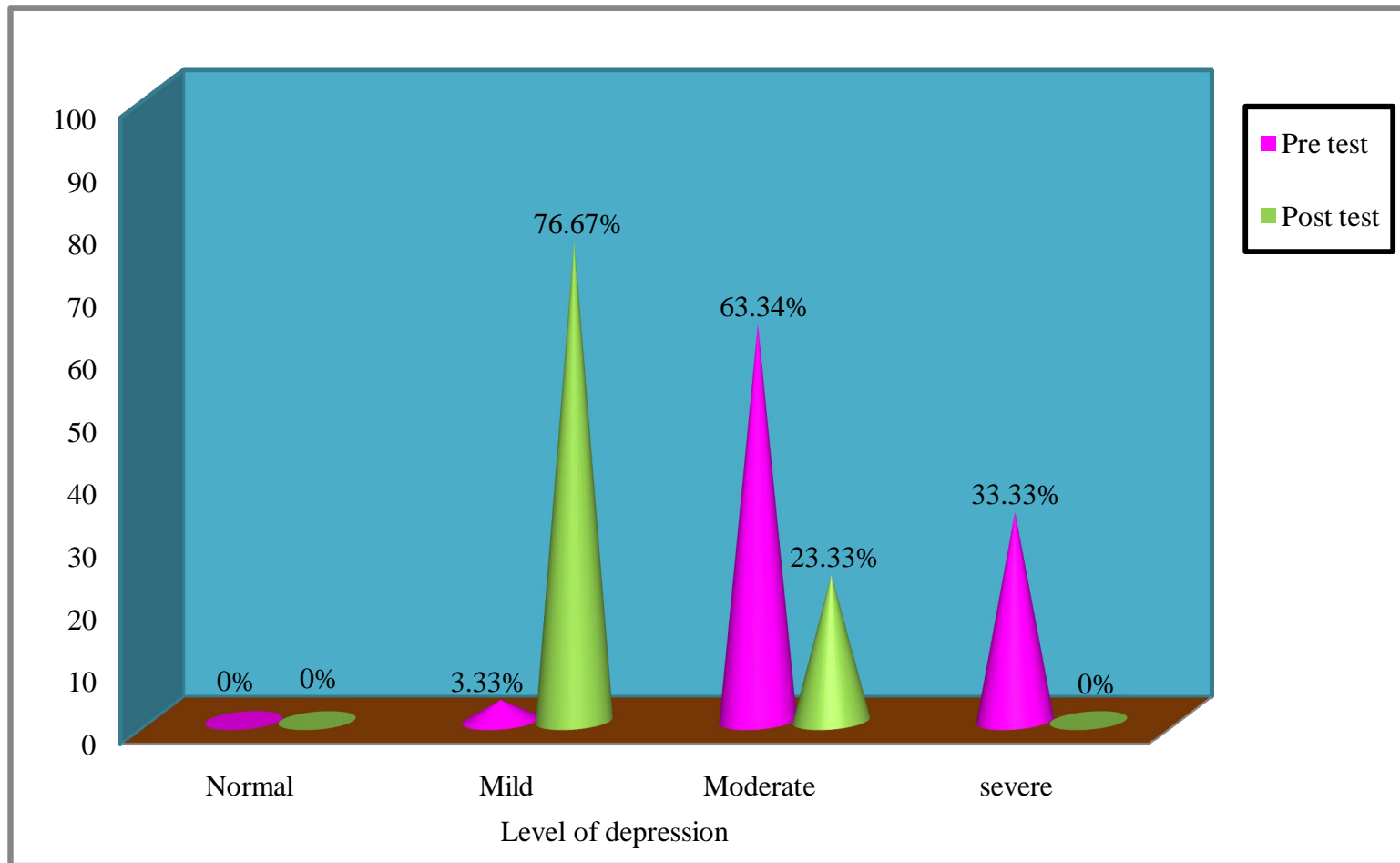


Fig.11: Percentage distribution of pre test and post test level of depression among elderly

SECTION-D

Table 4 : Comparison of mean and standard deviation between pre test and post test level of joint pain among elderly

N = 30

Level of joint pain	Mean	S.D	Paired 't' Value
Pre test	6.00	1.74	17.690***
Post Test	2.43	1.85	

*** $p < 0.001$, S – Significant

Table 4 depicts the comparison of mean and standard deviation between pre test and post test level of joint Pain among elderly. The pre test mean score of joint pain was 6.00 with standard deviation of 1.74 and in post test mean score was 2.43 with standard deviation of 1.85. The paired 't' value of 17.690 was very highly significant at $p < 0.001$ level. The difference between pre test and post test score was decreased from 6.00 to 2.43 it indicates the effectiveness of Aromatherapy on joint pain among elderly.

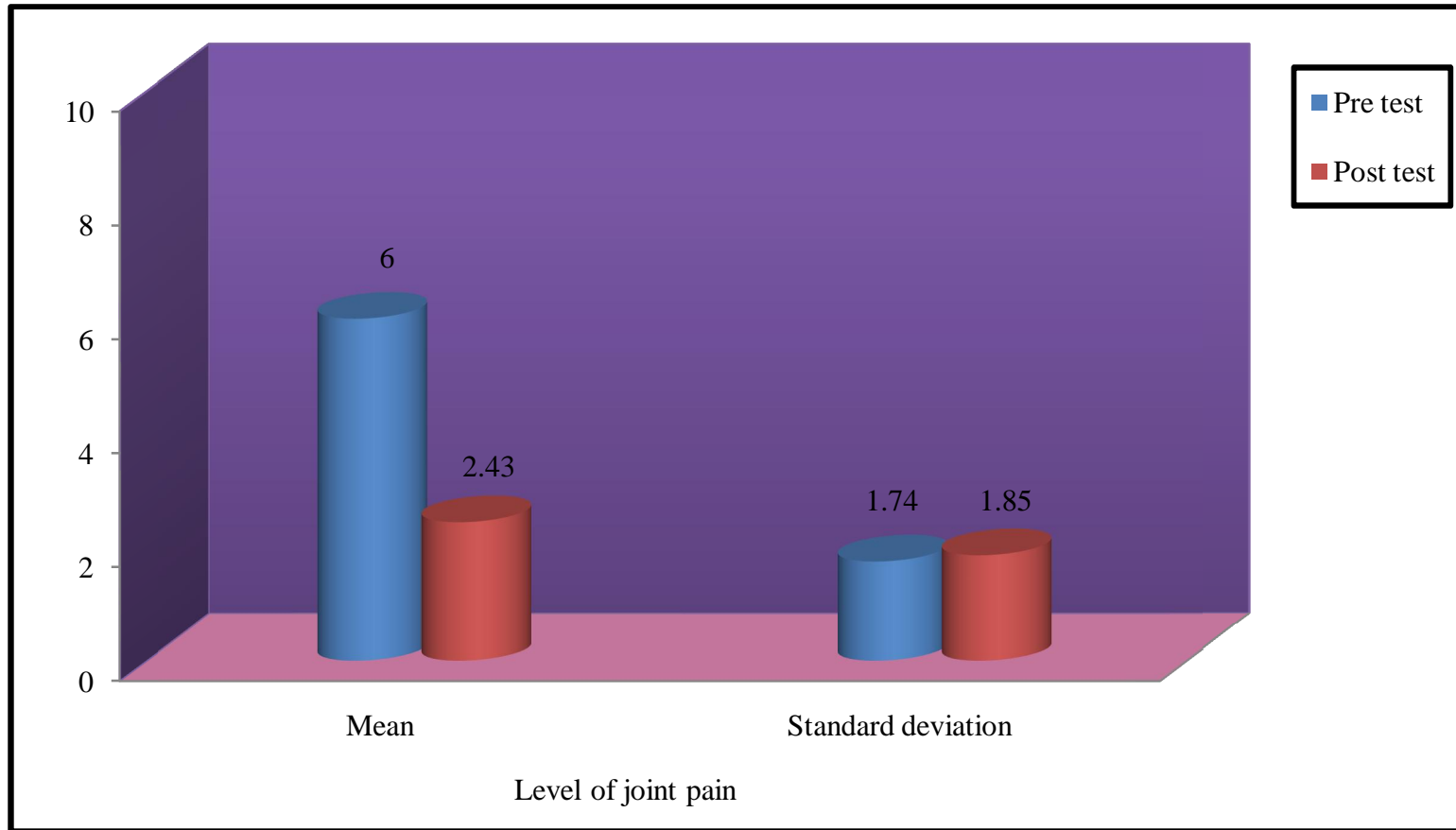


Fig.12: Comparison of mean and standard deviation between pre test and post test level of joint pain among elderly

SECTION-E

Table 5: Comparison of mean and standard deviation between pre test and post test level of depression among elderly

N = 30

Level of depression	Mean	S.D	Paired 't' Value
Pre test	8.60	2.11	19.495***
Post Test	3.30	1.84	

***p<0.001, S – Significant

Table 5 depicts that the comparison of mean and standard deviation between pre test and post test level of depression among elderly. The pre test mean score of depression was 8.60 with the standard deviation of 2.11 and in post test mean score was 3.30 with the standard deviation 1.84. The Paired 't' value of 19.495 was very highly significant at p<0.001 level. The difference between pre test and post test score was decreased from 8.60 to 3.30. It indicates that the effectiveness of Aromatherapy on depression among elderly

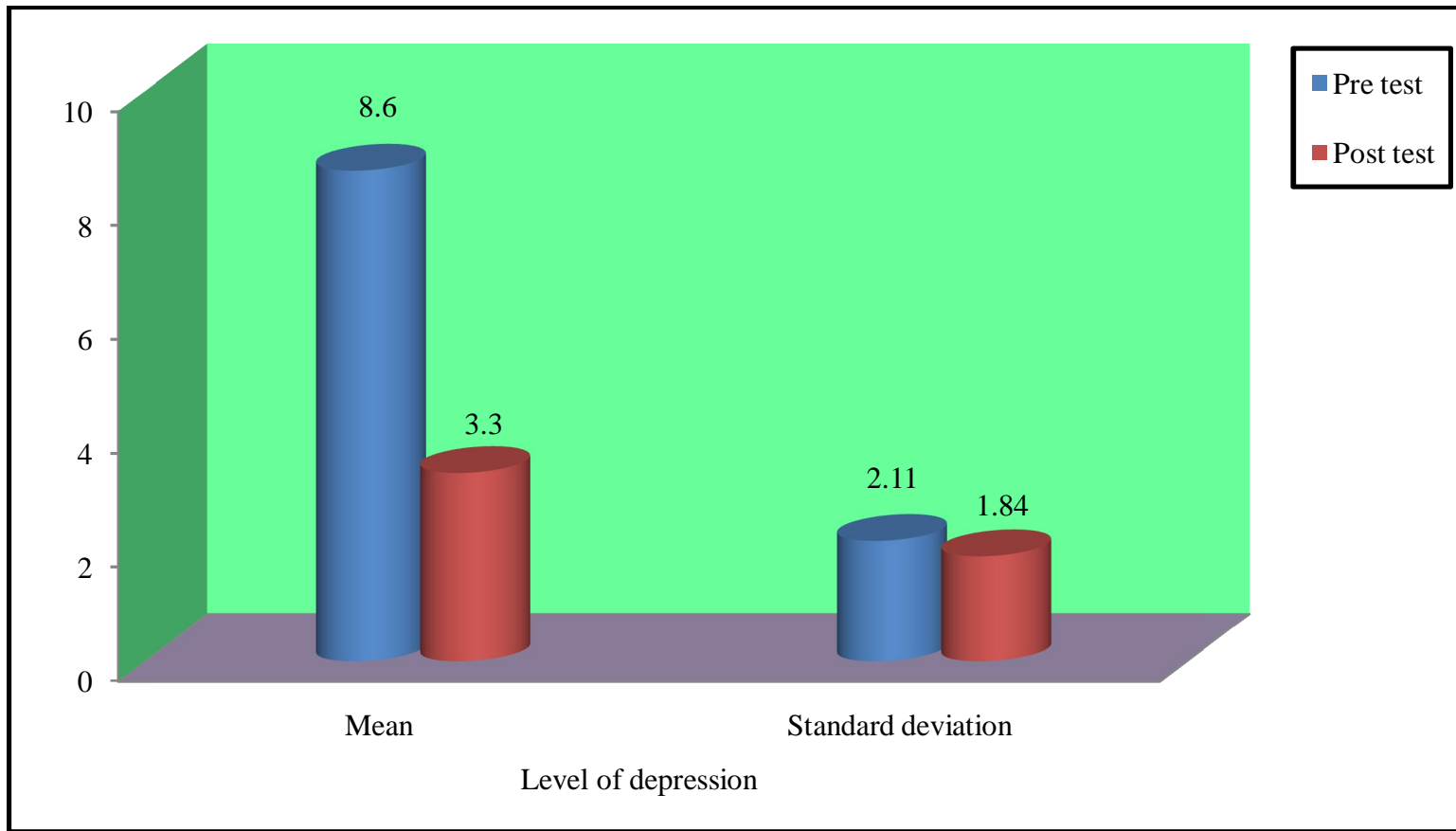


Fig.13: Comparison of mean and standard deviation between pre test and post test level of depression among elderly

SECTION-F

Table 6: Association of post test level of joint pain among elderly with their selected demographic variables

N = 30

S.No	Demographic Variables	No Pain		Mild Pain		Moderate Pain		Chi-Square Value χ^2
		No.	%	No.	%	No.	%	
1.	Age in years							$\chi^2 = 6.111$ d.f = 4 N.S
	60 – 70	1	3.3	11	36.7	2	6.7	
	71 – 80	1	3.3	8	26.7	2	6.7	
	81 – 90	1	3.3	1	3.3	3	10.0	
2.	Marital Status							$\chi^2 = 9.125$ d.f = 6 N.S
	Married	0	0	2	6.7	0	0	
	Unmarried	0	0	5	16.7	1	3.3	
	Divorcee	0	0	1	3.3	3	10.0	
	Widower	3	10.0	12	40.0	3	10.0	
3.	Religion							$\chi^2 = 1.667$ d.f = 4 N.S
	Hindu	1	3.3	10	33.3	2	6.7	
	Muslim	2	6.7	8	26.7	4	13.3	
	Christian	0	0	2	6.7	1	3.3	
	Others	0	0	0	0	0	0	
4.	Educational Status							$\chi^2 = 2.447$ d.f = 4 N.S
	No formal education	1	3.3	2	6.7	2	6.7	
	School education	2	6.7	16	53.3	4	13.3	
	Graduates	0	0	2	6.7	1	3.3	
5.	Number of Children							$\chi^2 = 3.532$ d.f = 6 N.S
	None	0	0	6	20.0	3	10.0	
	1 to 3	2	6.7	10	33.3	2	6.7	
	4 to 6	1	3.3	3	10.0	1	3.3	
	>6	0	0	1	3.3	1	3.3	
6.	Duration of stay at old age home							$\chi^2 = 13.382$ d.f = 6 S*
	<1 year	0	0	4	13.3	0	0	
	1 - 3 year	0	0	6	20.0	1	3.3	
	3 - 5 year	3	10.0	2	6.7	3	10.0	
	>5 year	0	0	8	26.7	3	10.0	
7.	Co-morbid illness							$\chi^2 = 5.012$ d.f = 8 N.S
	Diabetes Mellitus	1	3.3	5	16.7	3	10.0	
	Hypertension	0	0	5	16.7	2	6.7	
	Diabetes Mellitus & Hypertension	1	3.3	2	6.7	1	3.3	
	Others	1	3.3	6	20.0	0	0	
	None	0	0	2	6.7	1	3.3	

*p<0.05, S – Significant, N.S – Not Significant

Table 6 showed that the association of demographic variables and post test level of joint pain. The result showed that there was statistical association with duration of stay in old age home and level of joint pain in post test at the level of $p < 0.005$

There was no statistical association was found with other demographic variables such as age, marital status, religion, education, number of children and co-morbid illness

Table 7: Association of post test level of depression among elderly with their selected demographic variables

N=30

S.No	Demographic Variables	Mild		Moderate		Chi-Square Value χ^2
		No.	%	No.	%	
1.	Age in years					$\chi^2 = 0.968$ d.f = 2 N.S
	60 – 70	11	36.7	3	10.0	
	71 – 80	9	30.0	2	6.7	
	81 – 90	3	10.0	2	6.7	
2.	Marital Status					$\chi^2 = 0.963$ d.f = 3 N.S
	Married	2	6.7	0	0	
	Unmarried	5	16.7	1	3.3	
	Divorcee	3	10.0	1	3.3	
	Widower	13	43.3	5	16.7	
3.	Religion					$\chi^2 = 5.674$ d.f = 2 N.S
	Hindu	12	40.0	1	3.3	
	Muslim	8	26.7	6	20.0	
	Christian	3	10.0	0	0	
	Others	0	0	0	0	
4.	Educational Status					$\chi^2 = 5.082$ d.f = 2 N.S
	No formal education	2	6.7	3	10.0	
	School education	19	63.3	3	10.0	
	Graduates	2	6.7	1	3.3	
5.	Number of Children					$\chi^2 = 9.059$ d.f = 3 S*
	None	8	26.7	1	3.3	
	1 to 3	10	33.3	4	13.3	
	4 to 6	5	16.7	0	0	
	>6	0	0	2	6.7	
6.	Duration of stay at old age home					$\chi^2 = 2.531$ d.f = 3 N.S
	<1 year	2	6.7	2	6.7	
	1 - 3 year	6	20.0	1	3.3	
	3 - 5 year	7	23.3	1	3.3	
	>5 year	8	26.7	3	10.0	
7.	Co-morbid illness					$\chi^2 = 0.608$ d.f = 4 N.S
	Diabetes Mellitus	7	23.3	2	6.7	
	Hypertension	6	20.0	1	3.3	
	Diabetes Mellitus & Hypertension	3	10.0	1	3.3	
	Others	5	16.7	2	6.7	
	None	2	6.7	1	3.3	

*p<0.05, S – Significant, N.S – Not Significant

Table 7 showed that the association of demographic variables and post test level of depression. The result showed that there was a significant association with number of children and level of depression in post test at the level of $p < 0.005$

There was no statistical association was found with other demographic variables such as age, marital status, religion, education, duration of stay in old age home, co morbid illness .

CHAPTER V

DISCUSSION

This chapter deals with discussion of the results obtained from the statistical analysis. A Study aimed to assess the effectiveness of Aromatherapy on joint pain and depression among elderly in Little Drops home for aged destitute at Chennai.

The hypothesis formulated was there was significant association between Aromatherapy and joint pain and depression among elderly. The review of literature include in this study provides a strong foundation for this study including the basis for conceptual frame work and formation of tool.

The conceptual frame work used for this study was based on Roy's adaptation model. The research design selected for this study was pre experimental one group pre test post test design. The sample consists of 30 elderly who suffered with joint pain and depression in Little drops home for aged destitute at Chennai. Purposive sampling technique was used to select the samples. The tool used for data collection consists of universal pain assessment scale and short form of geriatric depression scale.

The tool was given to the sample to assess the pre test level of joint pain and depression. After conducting pre test, the Aromatherapy massage given by the investigator for 15-20 minutes for each leg daily for 10 days on knee joint. The investigator conducted the post test on the last day of the intervention by using the same tool.

The data obtained analyzed using both descriptive and inferential statistics. Demographic variables of elderly analyzed in terms of frequency and percentage distribution. The distribution of demographic variables among elderly showed that the majority of elderly with joint pain and depression. In regard to the age majority 14 (46.67%) elderly were in the age group of 60-70 years, In

considering the marital status 18 (60.0%) were widower, in concern with religion, 14 (46.67%) were belongs to Christian. With regard to educational status 22 (73.32%) have completed school education. In considering the number of children 14 (46.67%) have 1-3 children. In accordance with duration in home majority 11 (36.67%) were staying more than 5years. In regard to Co-morbid illness 9 (30.0%) of them having Diabetes Mellitus.

The first objective of the study was to assess the pre test level of joint pain among elderly.

In pre test 1 (3.33%) elderly had mild joint pain, 17 (56.67%) had moderate joint pain and 12 (40.0%) elderly had severe joint pain and none of them had no pain. The analysis revealed that the pre test level of joint pain.

The study correlates with study done by George. K, et al., (2001) which conducted to assess the effectiveness of Aromatherapy on joint pain and depression among arthritis patients at college of nursing, Christian University, at UK. Quasi experimental design was used for this study there were forty arthritis patients were randomly selected to control group and experimental group. Only experimental group received lavender essential oil Aromatherapy massage for 30 minutes daily for a week and control group received routine management. The study results showed that the Aromatherapy significantly decreased both joint pain and depression score of the experimental group than the control group. The study concluded that the Aromatherapy had major effect on decreasing joint pain and depression levels in arthritis patients.

The second objective of the study was to assess the pre test level of depression among elderly.

In pre test level of depression 1 (3.33%) elderly had mild depression, 19 (63.34%) had moderate depression and 10 (33.33%) elderly had severe depression and none of them had no depression. The analysis revealed that the pre test level of joint pain.

The study findings are consistent with the result of by Gym, S. & Rufiski, D. M, (2004) which was conducted to assess the effectiveness of use of Aromatherapy among geriatric patients to decrease the anxiety and depression and to promote increase sense of wellbeing. The study was conducted in department of nursing, university of California, at USA. This study was conducted among seventeen geriatric patients. Only experimental group received lavender Aromatherapy not in control group. This study results showed that Aromatherapy reflected a positive change in anxiety, depression and sense of wellbeing than control group.

The third objective of the study was to determine the effectiveness of Aromatherapy on joint pain and depression among elderly.

In post test level of joint pain 3 (10.0%) elderly had no joint pain, 20 (66.67%) had mild joint pain, and 7 (23.3%) elderly had moderate joint pain and none of them perceived severe joint pain. In post test level of depression 23 (76.67%) elderly had mild depression, 7 (23.3%) had moderate depression, and none of them perceived no depression and severe depression. The analysis revealed that the post test level of joint pain and depression.

The study correlates with the study done by Simon. T. C, et al., (2006) to assess the effectiveness of massage with aromatic essential oils for knee joint pain at Vincent hospital, in Spain. Fifty arthritis patients were selected for this study. Fifty arthritis patients were divided randomly into two groups. Only experimental group received six massage sessions done with lavender and eucalyptus oil for 3 weeks. The level of pain score evaluated by universal pain assessment scale. The result showed that there were significant changes in pain score among experimental group than control group. The study revealed that aroma massage can be used as an alternative method for knee joint pain relief.

The study correlates with the study done by Jaden. N, (2005) to assess the effect of Aromatherapy on joint pain, depression and feelings of satisfaction in life among elderly at Rheumatic Centre, South Korea. Quasi experimental design

was chosen for this study. There were sixty patients who participated in this study. The essential oils used were lavender, marjoram, eucalyptus and pepper mint for Aromatherapy. Only the experimental group received Aromatherapy for thrice in a day for three weeks. The data were collected in the form of pain score and depression score which were analyzed using a 2-test, Fischer's exact test, t-test and paired t-test. The study result showed that Aromatherapy significantly decreased both joint pain and depression score of the experimental group compared with the control group.

The fourth objective was to associate the post test level of joint pain and among elderly with their selected demographic variables.

The association of demographic variables and post test level of joint pain result showed that there was statistical association with duration of stay in old age home and level of joint pain in post test at the level of $p < 0.005$

There was no statistical association found with other demographic variables such as age, marital status, religion, education, number of children and co-morbid illness

The association of demographic variables and post test level of depression result showed that there was a significant association with number of children and level of depression in post test at the level of $p < 0.005$

There was no statistical association found with other demographic variables such as age, marital status, religion, education, duration of stay in old age home, co morbid illness .

The study correlates with the study done by Ebenezer. J. et al, (2009) a randomized control study to assess the effect of Aromatherapy on joint pain and depression in osteoarthritis patients. About two fifty patients with osteoarthritis in the age group of 65–80 years were randomly assigned to Aromatherapy massage and control group. The experimental group received 6 massage sessions in alternative days for 2 weeks. The result reveals that the

Aromatherapy massage is better in reducing pain, depression, blood pressure and pulse rate in patients with osteoarthritis. The study concluded that Aromatherapy massage had a positive effect on joint pain and depression among elderly in osteoarthritis patients.

CHAPTER VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

The heart of the research project lies in reporting the findings of the study. This is the most creative and demanding the part of the study. This chapter gives a brief account of the present study including the conclusion drawn from the findings, recommendations, limitations of the study, suggestions for the study and nursing implications. The present study was to assess the effectiveness of Aromatherapy on joint pain and depression among elderly in Little Drops home for aged destitute at Chennai.

Many elderly people tend to dismiss joint pain and body aches as part of ageing and would rather self-medicate or quietly endure the pain. But untreated pain can become chronic and greatly diminish their quality of life. Almost all elderly people are affected by joint changes, ranging from minor stiffness to severe arthritis. Massage is one of the best ways to slow or prevent problems with the muscles, joints, and bones. A moderate massage program can help the person to maintain strength, balance, and flexibility. Massage helps the bones and a muscle stay strong and helps to get relief from pain. Depression doubles an elderly person's risk of cardiac diseases and increases their risk of death from illness. At the same time, depression reduces an elderly person's ability to rehabilitate. To reduce the joint pain and depression Aromatherapy is necessary to improve the quality of life among elderly.

The study was done to evaluate the effectiveness of Aromatherapy on joint pain and depression among elderly in Little drops old age home for aged destitute at Chennai.

The objectives of the study were as follows,

1. To assess the pre test level of joint pain among elderly.
2. To assess the pre test level of depression among elderly.
3. To determine the effectiveness of Aromatherapy on joint pain and depression among elderly.
4. To associate the post test level of joint pain and depression among elderly with their selected demographic variables.

The hypothesis formulated was there is significant association between Aromatherapy and joint pain and depression among elderly. The review of literature include in this study provides a strong foundation for this study including the basis for conceptual frame work and formation of tool.

The conceptual frame work used for this study was based on Roy's adaptation model. The research design selected for this study was pre experimental one group pre test post test design. The sample consists of elderly who suffered with joint pain and depression in Little drops home for aged destitute at Chennai. Purposive sampling technique was used to select the samples. The tool used for data collection consists of Universal pain assessment scale and Short form of geriatric depression scale.

The tool was given to the sample to assess the pre test level of joint pain and depression. After conducting pre test, the Aromatherapy massage given by investigator for 15-20 minutes for each leg daily for 10 days. The investigator conducted the post test on the last day of the investigation by using the same tool.

The data obtained analyzed using both descriptive and inferential statistics. Demographic variables of elderly analyzed in terms of frequency and percentage distribution. The distribution of demographic variables among elderly showed that the majority of elderly with joint pain and depression. In regard to the age majority 14 (46.67%) elderly were in the age group of 60-70 years, In

considering the marital status 18 (60.0%) were widower, in concern with religion, 14 (46.67%) were belongs to Christian. With regard to educational status 22 (73.32%) have completed school education. In considering the number of children 14 (46.67%) have 1-3 children. In accordance with duration in home 11 (36.67%) were staying more than 5years. In regard to Co-morbid illness majority 9 (30.0%) of them having Diabetes Mellitus.

The data analysis revealed that there was significant relationship between the Aromatherapy on joint pain and depression among elderly. The pre test mean score of joint pain was 6.00 with standard deviation of 1.74 and in post test mean score were 2.43 with standard deviation of 1.85. The paired 't' test value of 17.690 was very highly significant at $p < 0.001$ level. The difference between pre test and post test score was decreased from 6.00 to 2.43. The pre test mean score of depression was 8.60 with the standard deviation of 2.11 and in post test mean score was 3.30 with the standard deviation 1.84. The paired 't' test value of 19.495 was very highly significant at $p < 0.001$ level. The difference between pre test and post test score was decreased from 8.60 to 3.30. Thus it indicates that the effectiveness of Aromatherapy on joint pain and depression among elderly.

CONCLUSION

The present study was to assess the effectiveness of Aromatherapy on joint pain and depression among elderly. The study finding revealed that there was significant reduction in level of joint pain and depression after intervention of Aromatherapy. Based on the statistical findings it is evident that provision of Aromatherapy on joint pain and depression among elderly is effective and help them to reduce the joint pain and depression. Therefore Aromatherapy was an effective complementary and alternative therapy. Aromatherapy is very important to improve the quality nursing care which helps to meet the needs of the elderly for their wellbeing.

NURSING IMPLICATION

The finding of the study has implications in various areas of nursing services, nursing education, nursing administration and nursing research.

NURSING SERVICES

An education can be provided to nurses to teach the patient about the Aromatherapy and its effectiveness which will be beneficial for the patients. It not only reduces joint pain and depression but also improves the concentration and provides refreshes to the body, the mind and the soul.

The nurse can teach this Aromatherapy not only in elderly but also in patients before and after surgery, any cardiac disease patients who suffered with joint pain and depression. It improves the skill of nursing care enlighten the knowledge on health education on Aromatherapy. Nurse can utilize the technique such as individual and group teaching to educate about Aromatherapy to reduce joint pain and depression.

NURSING EDUCATION

The findings of the study have some implications for nursing education, must focus on the promotion of health. The nursing students can imparted with knowledge of Aromatherapy to improve their concentration and also in providing effective nursing care to the patient.

Encourage the students for effective utilization of research based practice regarding Aromatherapy among elderly and also for other types of patient. Educate the students to make use of available literature to prevent joint pain and depression. Periodic seminars and group discussion can be arranged regarding the Aromatherapy among patients with joint pain and depression.

NURSING ADMINISTRATION

Nursing administration can formulate policies that will include all nursing staff to be actually involved in Aromatherapy in their respective of hospital and staff and college. In nursing administration the Aromatherapy can be included in training programme to educate, to direct, to motivate the staff towards not only on elderly also to other stressful and intolerable diseases.

Nursing administrator have responsibility as supervisor on creating awareness programme regarding joint pain and depression by free distribution of booklets, handouts and charts regularly in patients suffered with joint pain and depression in health clinics, urban and rural. The separate nursing education department can be organized for teaching Aromatherapy for educating registered nurses.

NURSING RESEARCH

Extensive research can be done in various methods relaxation techniques and advanced method for reduction of joint pain and depression. This study can be used for the reference purposes. The study can be done in all filed to assess the reduction in their depression level. The study can be a base line for further studies to build upon and motivate the other investigator to conduct further studies in this are in different aspects.

RECOMMENDATIONS

- The same study can be conducted with large samples
- The study can be conducted in other age group
- A similar can be conducted in hospital setting.
- A longitudinal study can be done using post intervention after one month, six month and after one year to assess the effectiveness of Aromatherapy.
- A comparative study can be done among patients with stress and anxiety.

LIMITATIONS

During the period of study the investigator faced the difficulties of short duration in data collection. The study sample size was small and samples were selected by non-random method limiting the generalizability.

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APPENDIX – A

PART- I

DEMOGRAPHIC VARIABLES

1. Age in years
 - a. 60-70
 - b. 71-80
 - c. 81-90
2. Marital status
 - a. Married
 - b. unmarried
 - c. Divorce (or) divorcer
 - d. Widow (or)widower
3. Religion
 - a. Hindu
 - b. Muslim
 - c. Christian
 - d. Others
4. Educational status
 - a. No formal education
 - b. School education
 - c. Graduates

5. Number of children
 - a. None
 - b. 1 to 3
 - c. 4 to 6
 - d. >6

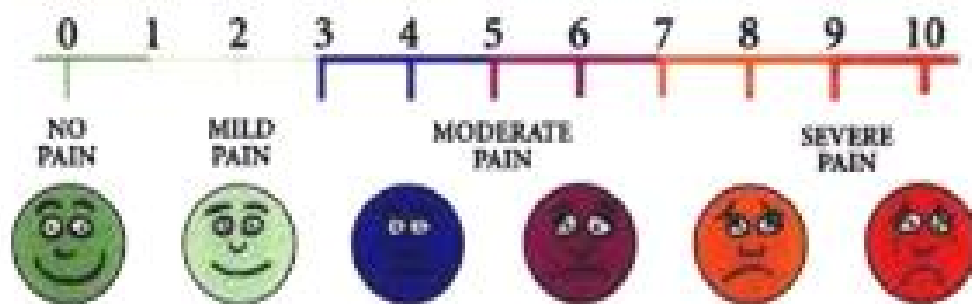
6. Duration of stay in old age home
 - a. <1 year
 - b. 1-3 year
 - c. 3-5 year
 - d. >5 year

7. Do you have other co-morbid illness (associated disease)?
 - a. Diabetes Mellitus
 - b. Hypertension
 - c. Diabetes Mellitus & Hypertension
 - d. Others
 - e. None

PART- II

UNIVERSAL PAIN ASSESSMENT TOOL

This pain assessment tool is intended to help patient care providers assess pain according to individual patient needs. Explain and use 0-10 Scale for patient self-assessment. Use the faces or behavioral observations to interpret expressed pain when patient cannot communicate his/her pain intensity.



PART-III
Geriatric Depression Scale (short form)

Instructions: Circle the answer that best describes how you felt over the past week.

- | | | |
|--|-----|----|
| 1. Are you basically satisfied with your life? | Yes | No |
| 2. Have you dropped many of your activities and interests? | Yes | No |
| 3. Do you feel that your life is empty? | Yes | No |
| 4. Do you often get bored? | Yes | No |
| 5. Are you in good spirits most of the time? | Yes | No |
| 6. Are you afraid that something bad is going to
happen to you? | Yes | No |
| 7. Do you feel happy most of the time? | Yes | No |
| 8. Do you often feel helpless? | Yes | No |
| 9. Do you prefer to stay at home, rather than going out
and doing things? | Yes | No |
| 10. Do you feel that you have more problems with
memory than most? | Yes | No |
| 11. Do you think it is wonderful to be alive now? | Yes | No |
| 12. Do you feel worthless the way you are now? | Yes | No |
| 13. Do you feel full of energy? | Yes | No |
| 14. Do you feel that your situation is hopeless? | Yes | No |
| 15. Do you think that most people are better off
than you are? | Yes | No |

Total Score _____

பகுதி -I

மக்கள்தொகை மாறிகள்

பின்வரும் கேள்விகளுக்கு பொருத்தமான விடையின் எதிராக ஒரு டிக் (✓) குறியிட்டு பதில் அளிக்கவும்:

1. வயது
அ) 60-70
ஆ) 71-80
இ) 81-90

2. திருமண தகுதி
அ) திருமணமாகாதவர்
ஆ) திருமணமாகியவர்
இ) விவாகரத்தானவர்
ஈ) கணவனை இழந்தவர்

3. மதம்
அ) இந்துமதம்
ஆ) முஸ்லீம்
இ) கிறிஸ்துவர்
ஈ) மற்றவை

4. கல்வி தகுதி
அ) படிப்பறிவு இல்லாதவர்
ஆ) அடிப்படைகல்வி
இ) உயர்கல்வி
ஈ) பட்டப்படிப்பு

5. குழந்தைகள்

அ) இல்லை

ஆ) 1-3

இ) 4-6

ஈ) >6

6. விடுதியில் தங்கும் கால அளவு

அ) > 1வருடம்

ஆ) 1-3வருடங்கள்

இ) 4-5 வருடங்கள்

ஈ) >6வருடங்கள்

7. மற்ற நோய்கள்

அ) இரத்த அழுத்தநோய்

ஆ) நீரிழிவு நோய்

இ) இரத்த அழுத்தநோய் & நீரிழிவுநோய்

ஈ) மற்றவை

உ) ஏதும் இல்லை

பகுதி - II

உலக வலி அளவை அளவீடு

இந்த அளவீடு மூலம் நோயாளியின் வலியை 0 - 10 வரை, முக பாவனை, நடத்தைகள் மற்றும் உணர்ச்சியை வைத்து அளக்கவும்.



வலி
இல்லை



குறைந்த
வலி



மிதமான வலி



மிக
அதிகமான
வலி



பகுதி – III

முதியோர் உள அழுத்த அளவீடு (சுருங்கிய வடிவம்)

கவனத்திற்கு : கடந்த ஒரு வாரத்தை கருத்தில்கொண்டு பதில்களில் எந்த ஒன்று உங்களுக்கு பொருத்தமானதோ அதை வட்டமிடவும்.

1. வாழ்க்கையில் சில அடிப்படையான விஷயங்களைப் பொருத்தவரையில் நீங்கள் திருப்திகரமாக இருப்பதாக நினைக்கிறீர்களா? ஆம் இல்லை
2. உங்களுடையதாக இருந்த பல செயல்களையும், விருப்பங்களையும் நீங்கள் தவிர்த்துவிடுகிறீர்களா? ஆம் இல்லை
3. உங்களுடைய வாழ்க்கையை வெறுமையாக உணர்கிறீர்களா? ஆம் இல்லை
4. எதிலும் விரும்பமில்லாத உணர்வு திரும்ப திரும்ப ஏற்படுகிறதா? ஆம் இல்லை
5. நீங்கள் பல நேரங்களில் நல்ல மனஉந்துதலோடு உள்ளீர்களா? ஆம் இல்லை
6. ஏதோ அசம்பாவிதம் நடக்கப் போகிறது என்று உங்களுக்கு கவலையாக இருக்கிறதா? ஆம் இல்லை
7. பெரும்பாலான சந்தர்பங்களில் நீங்கள் மகிழ்ச்சியாக உணர்கிறீர்களா? ஆம் இல்லை
8. அடிக்கடி நீங்கள் ஆதரவற்றிருப்பதாக உணர்கிறீர்களா? ஆம் இல்லை
9. வெளி இடங்களுக்குச் செல்வதையோ, விரும்பியதை செய்வதை விடவும் வீட்டில் இருப்பதையே விரும்புகிறீர்களா? ஆம் இல்லை
10. ஞாபகம் சம்பந்தமான பிரச்சனை உங்களுக்கு நிறைய இருக்கிறது என்று நினைக்கிறீர்களா? ஆம் இல்லை
11. இந்த வாழ்க்கையை மிகவும் அழகானதென்று உணர்கிறீர்களா? ஆம் இல்லை
12. இப்பொழுது நீங்கள் வாழும் வாழ்க்கை, 'பிரயோஜனமற்றது' என்று எண்ணம் கொள்கிறீர்களா? ஆம் இல்லை
13. நீங்கள் முழு சக்தியோடு/ திறனோடு இருப்பதாக உணர்கிறீர்களா? ஆம் இல்லை
14. நீங்கள் தற்போது இருக்கும் சூழல் உதவிகரமற்றது என்று எண்ணுகிறீர்களா? ஆம் இல்லை
15. பலரும் உங்களை விட மேம்பட்ட வாழ்க்கை வாழ்வதாக நினைக்கிறீர்களா? ஆம் இல்லை

மொத்தம் மதிப்பெண் _____

APPENDIX- B



CERTIFICATE OF ETHICAL CLEARANCE

MADHA COLLEGE OF NURSING
ETHICAL COMMITTEE

College Campus :

 Madha Nagar,
 Somangalam road,
 Kundrathur,
 Chennai - 69

Date: 15.03.2014

Chairman of Committee:

Dr. S. Madan kumar. M.D., Dip. A & E
 Director,
 Madha Medical College & Research
 Institute, Thandalem.

Members:

Dr. K. Gajendran. M.D., D.V.,
 Principal,
 Madha Medical College & Research
 Institute, Thandalem.

Dr. A. Dhanikachalam. M.S., Mch
 Medical Superintendent,
 Madha General Hospital,
 Madha Medical College & Research
 Institute, Thandalem.

Dr. V. Vijai Krishnan. M.P.T,
 Principal,
 Madha College of Physiotherapy,
 Kundrathur

Dr. B. Tamilarasi, M.Sc (N), P.h.D.,
 Principal,
 Madha College of Nursing, Kundrathur

Mrs. Grace Samuel, M.Sc (N),
 Vice Principal,
 Madha College of Nursing, Kundrathur

CERTIFICATE OF ETHICAL CLEARANCE

This is to certify that the research proposal,
 "Effectiveness of Aromatherapy on joint pain and depression
 among elderly in Little Drops home for aged destitute at
 Chennai", submitted by Ms. Vanaja. R. student of I year
 M.Sc Nursing (Medical Surgical Nursing) is hereby approved and
 granted ethical clearance by the Ethical Committee of the
 institute.

This clearance is valid for the period of 2 years.


PRINCIPAL
MADHA COLLEGE OF NURSING
MADHA NAGAR, KUNDRATHUR,
CHENNAI - 600 069
PHONE : 24780738

APPENDIX - C**LIST OF EXPERTS FOR CONTENT VALIDITY****Mrs. JAYASRI, R.N., R.M., M.Sc.(N).,**

Principal,
MIOT College of Nursing,
Manapakkam,
Chennai- 600089

Mrs. HEMA SURESH, R.N., R.M., M.Sc. (N).,

Principal,
ACS college of Nursing,
Dr.MGR Educational and Research Institute University,
Poonamalle high road,
Chennai-600077

MR. RAMACHANDRAN , M.B.B.S.,

General consultant,
Little Drops Home For Aged Destitute,
Porur,
Chennai – 600069.

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem **“A study to assess the effectiveness of aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai”** prepared by **Miss. Vanaja. R M.sc (N) I year** student currently pursuing her M.sc(N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kunrathur, Chennai-69** is found to be valid to the best of my knowledge.

Impir
18/9/2014.

PRINCIPAL
MIOT COLLEGE OF NURSING
4/112, Mount Poonamallee Road,
Manapakkam, Chennai - 600 089.

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem **“A study to assess the effectiveness of aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai”** prepared by **Miss. Vanaja. R M.sc (N) I year** student currently pursuing her M.sc(N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kunrathur, Chennai-69** is found to be valid to the best of my knowledge.



Injema
20/3/2014
PRINCIPAL
FACULTY OF NURSING
Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
UNIVERSITY
(DECL. U/S 3 OF UGC ACT 1956)
CHENNAI-95.

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem **“A study to assess the effectiveness of aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai”** prepared by **Miss. Vanaja. R M.sc (N) II year** student currently pursuing her M.sc(N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kunrathur, Chennai-69** is found to be valid to the best of my knowledge.


Dr. K. RAMACHANDRAN
(REGD. MEDICAL PRACTITIONER)
T-8, II BLOCK, SOUTHERN SHELTERS
MADANAPURAM, CHENNAI-600114
Regd. No. 764

APPENDIX – D

	LITTLE DROPS (Regd.) PUBLIC CHARITABLE TRUST	☎ : 2476 7763 Cell : 9884080864
Office : No. 1, Kalluri Salai, Koluthuvanchery, Paraniputhur (P.O.), Chennai - 600122. E-mail : littledropshome@yahoo.com Website : www.forlittledrops.org		
PERMISSION LETTER		14-MAY-2014
From, LITTLE DROPS, Home for aged destitutes No1,Kalluri salai,koluthuvanchery, Paraniputhur, Chennai-6000122		
Ms.VANAJA.R, M.Sc (N) SECOND YEAR, Madha college of Nursing , Kundrathur, Chennai-69 is permitted to do project work (A Study to assess the effectiveness of AROMATHERAPY on joint pain and depression among elderly in LITTLE DROPS home for aged destitute at Chennai.) from 19 th May,2014 – 19 th JUN,2014 (1 month) in upgraded LITTLE DROPS home for aged destitute at Chennai.		
		
Muthukumar.A (Project co-ordinator) LITTLE DROPS PUBLIC CHARITABLE TRUST No.1, Kalluri Salai, Kolathuvanchery, Paraniputhur PO., CHENNAI - 602 101.		
<hr/> Shelter : I : #8, Viswasa Nagar, Koluthuvancheri, Paraniputhur (P.O), Chennai - 600122. Ph : 24766530 Shelter : II : #1. Melathur-Nalur. Erikarai Road, Somangalam, Chennai - 602 109. Ph : 27190565		

APPENDIX-E

Letter seeking consent of the subjects for the participation In the research study

I am voluntarily willing to participate in the study conducted by Ms. Vanaja.R , on “**A STUDY TO ASSESS THE EFFECTIVENESS OF AROMATHERAPY ON JOINT PAIN AND DEPRESSION AMONG ELDERLY IN LITTLE DROPS HOME FOR AGED DESTITUTE AT CHENNAI**”. I will also co-operate with the researcher in providing necessary information. I was explained that the information provided would be kept in confidential and used only for above mentioned study purpose.

Signature of the Investigator

Signature of the patient

Place:


Place:

Date:

Date:

APPENDIX-F**CERTIFICATION FOR ENGLISH EDITING****TO WHOM SO EVER IT MAY CONCERN**

This is to certify that the dissertation, **“A study to assess the effectiveness of aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai” 2014-2015**”, prepared by Miss. Vanaja.R II year M. Sc (N)., student of Madha College of Nursing, Kundrathur, Chennai, for the dissertation edited for English language appropriateness.


A.R. VIGNESH, M.A., B.Ed.,
B.T.Asst. (English).
Govt Boys Hr. Sec. School.
Arni. T.V. Malai. Dt.632 301.

CERTIFICATION FOR TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation, **“A study to assess the effectiveness of aromatherapy on joint pain and depression among elderly in Little drops home for aged destitute at Chennai” 2014-2015**”, prepared by Miss. Vanaja.R II year M. Sc (N)., student of Madha College of Nursing, Kundrathur, Chennai, for the dissertation edited for tamil language appropriateness.

கா. ருபசுந்தரி

கா. ருபசுந்தரி எம்.ஏ., எம்.எட்.,
தமிழாசிரியை
அரசு ஆண்கள் மேல்நிலைப்பள்ளி
ஆரணி. தி.மலை.மா-632301.

Fair One Aroma Therapy SPA Center

No. 221 Sugi Building 1st Floor,
Moovarasampet Main Road,
Madipakkam, Chennai - 600091
Tel: 044 45565438 Cell: 9841881254
email: faironebauty@gmail.com



Date: 28/04/2014

CERTIFICATE

This is to certify that Ms. Vanaja.R has undergone intensive
AROMA THERAPY BODY MASSAGE training program in our institution
From 18th April 2014 to 28th April 2014.

FAIR ONE AROMA THERAPY SPA CENTER
V. Hemavathi
Authorised Signatory

APPENDIX-G

AROMATHERAPY

Aromatherapy is the practice of using natural oils to enhance psychological and physical well-being. Aromatherapy is the treatment or prevention of disease by use of essential oils. The concept of aromatherapy was first mooted by a European scientists and doctors, in about 1907 - 1937.

The materials employed include mainly essential oils and carrier oils.

- Essential oils: Fragrant oils extracted from plants and flowers or delicate plant tissues. (e.g., lavender oil)
- Carrier oils: Typically oily plant base triglycerides that dilute essential oils for use on the skin (e.g., almond oil).



The modes of using aromatherapy include:

- ✓ Inhalation
- ✓ Applying on skin by massage
- ✓ Oral(rarely taken if advised by Aroma therapist)

IMPORTANCE OF AROMATHERAPY

Aromatherapy massage is a popular way of using essential oils with carrier oil because it works in several ways at the same time. While doing aromatherapy massage, skin absorbs essential oil and also breathes them in and experiences the physical therapy of the massage itself. Essential oil should never be used undiluted on the skin, and needs to be mixed with a carrier oil (also referred to as a base oil) to dilute the concentrated molecules and to help spread them over the surface of the skin, and this is done by diluting them in carrier oils.

Lavender oil is nature's most powerful analgesic and it helps to reduce depression. Aroma therapy with lavender oil absorbed through skin then its penetrate deeply and is purported to decrease the arousal of the autonomic and central nervous system and to increase parasympathetic activity.



The Aromatherapy massage consists of following steps:

STEP:1

- ✓ **Mixing the Aromatherapy Massage Oil:** Pour about one cup of lavender oil with almond oil into the glass bowl in the ratio of 15drops lavender oil with 100ml almond oil and mix it gently. Essential oils are highly concentrated so only a few drops are needed. Do not use mineral or baby oil as this will clog the pores of the skin.

STEP: 2

- ✓ Once the massage recipient is comfortably settled on the table or bed and cover with sheet except the area which should be massage, begin the massage.

STEP: 3

- ✓ Pour a little bit of the oil into the palm of your hand, rub your hands together and apply it to the recipient's leg with long, warming strokes from upper thigh to foot and ask them to smell it. Start aromatherapy massage with various massage strokes and techniques.



There are various techniques or strokes are used while giving aromatherapy massage

Effleurage (gliding)

- ✓ Effleurage is the main or principle stroke to warm up the muscles and to prepare the soft tissue for deeper treatment. This free flowing continuous movement is done with the flat palm of one or both hands with steady pressure.



- ✓ It's done by gently rubbing the muscle with the palms of the hands. It is practiced at the beginning and end of a session.

Fanning



- ✓ This fanning motion is used on the thigh, knee joint till ankles and feet to stretch and manipulate tension away from the muscles.

Feathering



- ✓ The feathering stroke is an extremely light stroke and is barely perceivable by the person receiving the massage, yet has a profoundly soothing effect.

Petrissage (kneading)



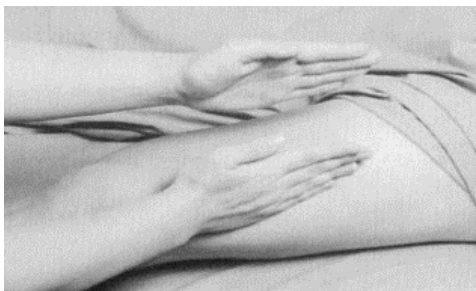
- ✓ With petrissage specific muscle groups are worked where tissue is easily grasped, and can be performed superficially or deep. Deep petrissage is helpful in promoting circulation and to loosen muscle tightness.

Friction and pressure



- ✓ Friction is mostly used around joints and helps to increase circulation and the masseur's fingers do not slide over the skin and in sports massage it is often referred to as cross-fiber stroking.

Tapotement (percussion)



- ✓ These alternate drumming movements are normally performed on broad areas of the body, such as the back.

Pummeling



- ✓ While forming a loose fist strike the body with the outer edge of the hand.

Hacking



- ✓ Rapid chopping motions are performed with the outer edge of the hand and the fingers slightly separated so as not to do a karate chop and are used mostly on the fleshy areas like upper shoulders or legs.

Cupping



- ✓ End aromatherapy massage with cupping. This is the final step of massage. The hands are cupped and the muscle of the leg is struck with the fingertips. After completing cupping at the end of the massage relaxaing muscle stroke was given to the client to relax the muscles.

After completing the massage ask the patient to lie down comfortably for some times to relax the muscles and joints.The entire aromatherapy should take 15 to 20 minutes.