

**A STUDY TO EVALUATE THE EFFECTIVENESS OF TOUCH  
THERAPY ON FUNCTIONAL INDEPENDENCE AMONG  
SENIOR CITIZENS AT SELECTED HOSPITAL, MADURAI.**



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“For a small moment have I forsaken you,  
But with great mercies will I gather you” says the LORD.

Bible- Isaiah-54:7

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## **ABSTRACT**

"It's not too difficult to get the skeletons out of the closet with people, but to get the gold out is a different matter. That is therapy. Psychology (Reflexology) is the Art of finding the gold of the spirit."

**Robert Johnson**

### **Introduction**

Old age (also referred to as one's eld) consists of ages nearing or surpassing the average life span of human beings, and thus the end of the human life cycle. Euphemisms and terms for old people include seniors (American usage), senior citizens (British and American usage) and the elderly. Old people have limited regenerative abilities and are more prone to disease, syndromes, and sickness than other adults. The medical study of the aging process is gerontology, and the study of diseases that afflict the elderly is geriatrics.

### **Statement of the problem**

A study to evaluate the effectiveness of touch therapy on functional independence among senior citizens at selected hospital, Madurai.

### **Objectives**

1. To assess the functional independence level among senior citizens before touch therapy.
2. To evaluate the effectiveness of touch therapy upon functional independence after touch therapy.
3. To find out the association between the touch therapy on functional independence with selected demographic variables.

### **Null Hypothesis**

**H<sub>01</sub>**- There is no significant difference between the pre test, and post test score on touch therapy and the level of functional independence among senior citizens.

**H<sub>02</sub>**- There is no significant association between the touch therapy and the level of functional independence with selected demographic variables.

### **Method of sampling**

The samples of senior citizens residing in geriatric care unit were selected randomly on the basis of simple random sampling which was carried out using lot method.

### **Description of the tool**

After an extensive review of literature and in consultation with experts in the field, the investigator identified a number of associated risk factors responsible for functional independence among senior citizens those who were in geriatric care unit. The tool used for the present study, was an interview schedule. The functional independence was measured using Modified North Wick Park Scale which is a standardized tool.

### **Scoring procedure**

The severity of functional dependence symptoms was measured in terms of Modified North Wick Park Scale score. The maximum score is 21 and above and minimum 10. For the purpose of the study, the severity level of independence on the basis of obtained score was classified as follows:

<b>Severity score</b>	<b>Classification</b>
1-10	Mild independence.
11-20	Moderate independence.
21 and above	Fully independence.

### **Conceptual frame work**

The conceptual frame work for the study was based on King's Goal Attainment Theory (1960). The research design selected for the study was truly experimental in nature. The study was done at Christian Mission Hospital, Madurai. The level of independence before and after to senior citizens with functional disability was studied. 30 were in the experimental group and 30 were in the control group. Modified North Wick Park Scale for Functional Independence was used for data collection which is standardized.

### **Findings**

In the experimental group the obtained '**t**' value **3.258** of the level of functional independence was highly significant and the calculated **chi-square value 5.37** shows no significant association with selected demographic variables of the senior citizens staying in the geriatric care unit.

### **Conclusion**

It is inferred that the reflexology is effective in improving the functional dependence among senior citizens. Based on the study, findings, recommendations and implications have been derived.

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# CHAPTER- 1

## INTRODUCTION

“It's easy to play any musical instrument: all you have to do is touch the right key at the right time and the instrument will play itself”

**Johannes Sebastian Bach**

We can speak different languages to others. According to **Gary Chapman**, “The Five Love Language”, and one of them is “**Physical Touch Language**” –‘you speak it if you truly believe that our bodies are for touching and would prefer human touch to gifts, help.etc’.

We crave touch from the very moment we are born. We learn through touch. It's where we first develop feelings of attachment and self esteem. The act of receiving nurturing touch makes us feel safe; it comforts us, and lets us know that we are loved.

Touch connects us to our own humanity, and nurturing touch improves our well –being. Simple hugs, a caress-soft, loving, nurturing touch are all that we all so desperately need and want.

In today's world, technology has reduced the amount of physical contact that people have with each other on a daily basis. With automatic bank machines, online shopping, internet, email and voice mail people can make appointments, dates or decisions without ever actually talking to or seeing another person.

According to Adoption.com, “Studies conducted in orphanages and hospitals tell us that infants deprived of skin contact will lose weight, become ill and may even die. Premature babies given periods of touch therapy gain weight faster, cry less, and show more signs of relaxed pulse, respiration rate and muscle tension.

As we grow older, we receive less and less touch. We have rationalized that touch is no longer important. And we forget that as older adults still need touch as much as we did when we were children. They receive less touch because they are more likely to be living alone.

Aging is a natural apparent fact in human life. The world is expected to experience an unprecedented aging of the human population in countries worldwide. It is probable that there are 416 million elderly people (aged 60 years and above)

around the globe and by 2020 world's 11.9 % of population will be above 60 years (Mr. Katz).

In India, the trend is the same, At present there are 77 million elderly persons in India, it can be expected to be 177 million in the next two and half decades. Already 7.5% of the total population is above 60 years.

According to the population estimation of Tamil Nadu 2001, Male senior citizens within 60-69 years of age were 5.35%; 70-79 years of age were 2.49% and 80 years of age and above were 0.86%; where as Female senior citizens in 60-69 years of age were 5.92%, 70-79 years of age were 2.41% ,80 years and above were 0.9%. In comparison with 1961, 1971, 1981, and 1991 years of census, there is an increase in the number of senior citizens in Tamil Nadu.

According to the city census in Madurai, the population aged 60-64 years was predicted as 3.05%, 65-69 year was projected as 2.10%, 70-74 years was reported as 1.54 %, 75-79 years was predicted as 0.78% and 80 and above years was anticipated as 0.88%.

It is estimated that with this increase in the population of the senior citizens, societies in each country to learn how to deal with a new set of health challenges. It is known that the senior citizens suffer from various types of problems physically, psychologically, economically and socially. 45% of old age people in India have chronic diseases and disabilities.

## **TOUCH THERAPIES**

Touch therapies are forms of integrative medicine that can be beneficial to patients with a variety of musculoskeletal (DiNucci, 2005), neurological (Hawranik, 2008), and cardio-pulmonary (MacIntyre et al., 2008) issues. These therapies aim to heal, alleviate stress, and enhance a general sense of well-being, when ill, injured or under stress, the flow of life energy within your body is obstructed or out of balance. This energy reduction often manifests through discomfort, pain, and anxiety.

Healing Touch Therapy uses touch to raise vibration influencing your energy system. This restores balance and harmony resulting in feeling well. Self-healing takes place when we are physically, emotionally, mentally, and spiritually in harmony.

Touch therapy is a massage which involves hands for a proper healing of the body. It is based upon the thought that every living soul needs a tender touch for

growing. The therapy can also heal other illness like infections, diabetes and heart failures.

#### **FORMS OF TOUCH THERAPIES INCLUDE:**

- **Reflexology:** The practice of massaging, or applying pressure to, specific parts of the feet and hands. Reflexology is based on a system of zones and reflex areas that correspond to various interconnected parts of the body.
- **Reiki:** The practice of placing hands lightly on or just above the person's body, palms down, using a series of 12-15 different hand positions each held for approximately 2-5 minutes. Reiki can be practiced by oneself, or can be received from someone else.
- **Therapeutic Touch:** The practice of moving hands in smooth rhythmic motions within a few inches of the body. Therapeutic Touch aims to re-pattern the body's energy field Touch therapy can be gentle whereas some are in deep and strong massage.
- **Deep massage:** It involves strong hand movements to get to deep muscles.
- **Rolfing:** It emphasizes controlling connective tissue, It involves a strong force to massage tissues.
- **Cranio sacral massage:** This touch therapy focuses mainly on the head and spine, to clear blockages in the spinal cord.

#### **Healthy touch tips**

In general, hugs, handshakes, a hand on the shoulder or a comforting rub on the back are examples of appropriate touch.

- Make sure the person you desire to touch consents before you proceed.
- You may verbally ask to touch and receive a verbal consent.
- You may extend your arms to hug a loved one and they may extend their arms to receive.
- You may extend a hand to offer a hand shake and the person reciprocates.
- You may move toward a person who appears in need of a comforting hand on the shoulder-Look in their eyes and watch their body language for consent.

## **SIGNIFICANCE AND NEED FOR THE STUDY**

### **Human touch secrets**

The skin is the largest organ in the body and touch is human's natural way of reacting to pain and stress and conveying love and compassion. Kisses, hugs, and holding hands, meanwhile are people's way of expressing emotions toward another person. The warmth of the hand held, the sensation of a soft cheek against ours, arms wrapped around shoulders in embrace, they can all go a long way toward expressing our affection for someone. But touch can actually give more than a momentary tingle or a second of solace. Touch can comfort and heal.

Aging is a negative attitude based on age. It leads to discrimination and disparities in the care given to the older people. In a world that has grown more complicated, more fierce in the demands made upon our hearts and pocket books there is one easy, free gift left, the power of touch.

Do not turn away from the elderly, disabled, terminally ill or long term care residents because their needs seem beyond our ability to give. The one thing they need the most is the most simple, yet profound gift we have to give, our kind hand holdings theirs.

A number of studies suggest that the appropriate use of touch by nurses has the potential to significantly improve the health status of older adults in particular. Touch can be useful with cognitively impaired, institutionalized, or hospitalized older adults.

The latest researches have shown that the people who are touch-deprived are prone to diseases and emotional dysfunction. Therapeutic touch and healing touch were once a topic of interest for many people. Even the US government paid for several studies and trained some nurses to use it on patients in the recovery room who were just post-op. There was no data to suggest it worked but they did it anyway, thinking that there could be no harm in trying.

From the above findings and reports, the researcher identified touch therapy as a viable nursing modality in improving the quality of life among senior citizens. And also, the researcher experienced it is still underutilized and understudied in the clinical setting. The appropriate use of touch therapy by nurses has the potential to significantly improve the functional independence for the older adults. So that the study is aimed at evaluating the effectiveness of touch therapy in order to make the senior citizens be independent.

## **STATEMENT OF THE PROBLEM**

A study to evaluate the effectiveness of touch therapy on functional independence among senior citizens at Selected Hospital, Madurai.

## **OBJECTIVES**

1. To assess the functional independence level among senior citizens before touch therapy.
2. To evaluate the effectiveness of touch therapy upon functional independence after touch therapy.
3. To find out the association between the touch therapy on functional independence with selected demographic variables.

## **NULL HYPOTHESIS**

**H<sub>01</sub>**- There is no significant difference between the pre test, and post test score on touch therapy and the level of functional independence among senior citizens.

**H<sub>02</sub>**- There is no significant association between the touch therapy and the level of functional independence with selected demographic variables.

## **OPERATIONAL DEFINITIONS**

### **Effectiveness**

In this study, effectiveness refers to the outcome of touch therapy in terms of improving the functional independence among senior citizens.

### **Touch therapy**

In this study, touch therapy is an alternative medicine. Therapeutic massage of reflexology which involves pressure applied by the finger tips of the investigator on the subjects, starting from the tips of the toes upwards till the knee joint and starting from the tips of the fingers and upwards to the elbow for the duration of 30 minutes daily, for 7 days.

### **Functional independence**

In this study, it refers to that ability of independence in participating in activities like mobility, bed transfer, toileting, bathing, etc in order to meet one's own need for their day today life.

**Senior citizens**

In this study, it refers to a male or female who all above 60 years of age residing in the geriatric home at Christian Mission Hospital, Madurai.

**ASSUMPTION**

- The physical, psychological, and social factors influence the functional ability.
- Touch promotes a feeling of being cared for and nurtured.
- The senior citizens are least touched group in our society
- Touch connects people to us to their own humanity.

**PROJECTED OUTCOME**

The study will evaluate the touch therapy in reducing the level on functional dependence among the institutionalized senior citizens in selected geriatric care unit. To awaken them to meet their daily functional activity the non-pharmacological interventions of reflexology helps to find out the nursing intervention in practice.



## **CHAPTER- II**

### **REVIEW OF LITERATURE.**

The chapter deals with the studies relevant to the present study which will be under the following headings:

1. Review related to functional independence on senior citizens.
2. Review related to reflexology on functional independence among senior citizens.

#### **REVIEW RELATED TO FUNCTIONAL INDEPENDENCE ON SENIOR CITIZENS**

**Santana Mda (2009).** One who conducted a study in North-Eastern Brazil on senior citizens' perception of their needs and social values involved in taking physical activity for their own benefit. This was a cross-sectional, interdisciplinary qualitative study, under pinned by theoretical-methodological social representation theory. A convenience, non-probabilistic, census-dependent method was used for obtaining the sample of 62 people aged 50 to 78. Analyzing the replies led to three types of elements being identified which were related to the social representation of physical activity as attributed by the elderly: a psychological dimension (represented by happiness, well-being), a social dimension (dancing) and a biophysical dimension (gymnastics, water-gymnastics and health).The subjects reported a positive association between physical activity, social interaction and well-being. The elderly also believed in the effects of physical activity's on physical-motor aspects and health. The social representation of physical activity by the group being studied was close to the bio psychosocial dimension of physical activity.

**Lázaro Alquézar A, (2007)** The study done in Spain. On the dependence related to aging is of particular interest, where the population is one of the most aged in Spain. The objective of this study is quantifying the degree of functional dependence for daily living activities (DLA) and identifying the personal traits related there to individuals age of 65 and above who are living at home and attend Community Centers in the city of Zaragoza .Cross-sectional study was with 380 individuals selected by two-stage sampling. The OARS-MFAQ questionnaire was used by way of personal interviews, analyzing questions which assess the functional capacity to carry out the DLA's and their scoring (dependent variable), socio

demographic variables, self-assessed health condition and actual and hypothetical informal help (independent variables). The chi-square was used for evaluating classified residual data ( $p < 0.05$ ) and multiple correspondence analyses. A total of 9.6% of the subjects showed "major/total dependence", this percentage increasing to 15.5% and 18.7% for those individuals above age 75 and 80, respectively. The "minor/moderate dependence" is related to being a female ( $p < 0.01$ ), health condition self-assessed as poor-passable ( $p < 0.0001$ ), being a widow(er) ( $p < 0.01$ ), having no elementary school education ( $p < 0.01$ ). Those individuals who are more elderly, females, widow/widowers, having a lesser degree of education and worse self-assessed health condition are more dependent. Practically one out of every ten non-institutionalized individuals 65 years of age or over, shows a severe deterioration of their functional capacity.

**Anders J, (2007)** study shows that, there is a strong relation between mobility, walking safety and living independently in old age. People with walking problems suffer from fear of falling and tend to restrict their mobility and performance level in the community environment-even before falls occur. This study was planned to test the validity and prognostic value of a fall risk screening instrument (Sturz-Risiko-Check) that has already shown its feasibility, acceptance and reliability, targeting independently living senior citizens.

**Taira K Tanaka H et al (2005)** study was conducted in the Prefecture of Longevity, Okinawa, on the elderly living in the village of Ogimi. It was revealed that those in the good sleep health group took short naps, a significantly fewer number fell into dozes, and a significantly greater number exercised regularly or walked. A significantly greater number of this group maintained regular eating habits over a 10-year span, and consumed more seaweed and fish. Participation in senior citizens' clubs was higher, reflecting high emotional adaptability. The study's results indicate a relationship between lifestyle and sleep health among the elderly, and suggest that deterioration of sleep health is related to physical and mental health.

**Machado GP, (.2004)** study done in, Brazil. The objective of this study is to assess the prevalence and to identify the factors associated with arthritis in the elderly population. A population based cross-sectional study was carried out among 1606 senior citizens ( $> \text{ or } = 60$  years of age). Arthritis was defined by: a) report of medical diagnosis of arthritis and b) report of chronic hand and knee symptoms (CHKS). Multiple logistic regressions were used to investigate the independent

association between arthritis and selected factors. Prevalence of medical diagnosis of arthritis was of 25.3% (15.3% in men and 31.9% in women). Prevalence of CHKS was of 44.2%. CHKS was negatively associated with gender (masculine) and years of education ( $>$  or  $=$  8) and positively associated with Body Mass Index (25-29, 30-34,  $>$  or  $=$  35 kg/m<sup>2</sup>), report of myocardial infarct, stroke symptoms and Chaga's disease. Our results are consistent with other studies concerning higher prevalence of arthritis among obese and less educated women. Identification of these characteristics of the senior citizens living in the community, with a higher prevalence of arthritis may subsidize the organization of healthcare programs for this age group.

**Aronson RE, Oman RF. (2004)** A study was conducted with senior citizens in the 2 rural communities of Ada and Lindsay, Oklahoma, American Indian. The purpose of this study was to explore contextual factors related to physical activity among senior citizens living in rural communities. Two focus groups were conducted. Themes from the focus groups included the following: (1) the types of daily activities engaged in by seniors; (2) the meaning and connotation of the words exercise and physical activity, with physical activity connotation for some the negative imagery of physical labor; and (3) the availability and suitability of settings for physical activity. For seniors living in rural settings in the lack of indoor facilities and the sometimes extreme climatic conditions serve as significant barriers to physical activity. This study suggests that programs seeking to encourage physical activity among seniors in rural areas could benefit from an assessment of resources and settings for physical activity and the avoidance of language that may have negative connotations for this population. At Home Instead Senior Care, its relationship before task, while continuing to provide superior quality service that enhances the lives of seniors everywhere.

## **REVIEW OF LITERATURE ON REFLEXOLOGY**

**Mackey BT (2001).** A study done in North Korea. Massage therapy and reflexology are manual therapeutic approaches used to facilitate healing and health and can be used by nurses in almost any setting. Information about massage therapy and reflexology is shared for the purpose of creating awareness about healing modalities and encouraging the use of basic techniques of these manual therapies. A review of a case study illustrates the safe and effective use of massage therapy and reflexology and familiarizes the nurse with the components of assessment and hands-on practice. Holistic nursing principles related to massage therapy and reflexology is woven throughout the study.

**Ross E, et.al (2005)** A study done in North America, The aim is to show how reflexology could facilitate phenomenological interviewing by probing the life-world of individual participants. It is an inter paradigmatic study, since it rests on the interface of Western and Oriental thought. This article reports on seven cases which were included in the qualitative, empirical investigation. During the sessions, reflex logical readings served as impetus for inquiry into the experiences of the participants, as congestions on reflex points and along meridians were interpreted in terms of physical organs and functions. These readings were related to corresponding emotions as accepted within the reflexology paradigm. It was, however, up to the participants to inform the researcher of events and/or circumstances that caused the emotions. Thus, nonverbal data communicated information that facilitated verbal exchange concerning the life-world of each participant.

**Alison While (2010)** study done in London, investigates the duration, intensity and type of physical activity undertaken by people aged 60 years and above in relation to their reported levels of participation in social activities and their perceptions of their neighborhood. The sample comprised 225 adults aged 60 years and over (response rate: 88.6 per cent; mean age 75.0 years; 76.7 per cent women). Only 20.8 per cent of the sample met the recommended levels of physical activity if heavy housework and heavy gardening were not included, rising to 48.0 per cent when these activities were included. Reported good health status was strongly associated with higher levels of physical activity although physical activity significantly declined with advancing age. Living in an area with good recreational facilities and taking part in social entertainment were significantly associated with being physically active at the recommended levels. Good health status is associated

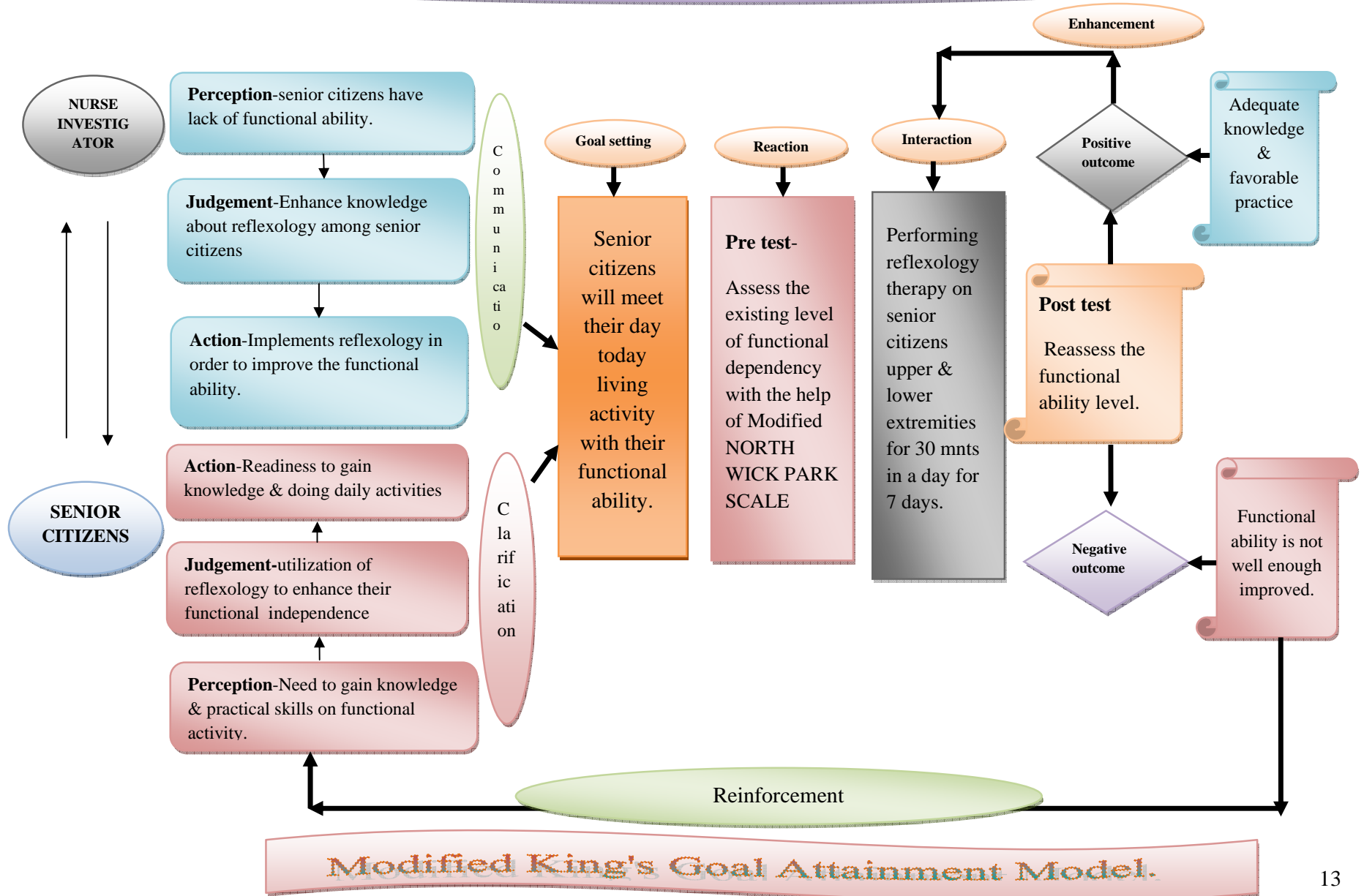
with levels of physical activity in older people. Heavy housework is an important physical activity and provides an activity for maintaining functional independence in old age.

**Benkelman's PG, (2010)** A Study was done in America. In view of the increasing number of senior citizens in our society who are likely to consult their age-related health problems, it is important to identify and understand the preferences of this group in relation to the non-medical attributes of care. The aim of this study is to improve our understanding about preferences of this group of patients in relation to non-medical attributes of primary health care. This may help to develop strategies to improve the quality of care that senior citizens receive. Semi-structured interviews (N = 13) with senior citizens (65-91 years) in a judgment sample were recorded and transcribed verbatim. The analysis was conducted according to qualitative research methodology and the frame work method. Continuity of care providers, i.e. general practice (GP) and practice nurses, GPs' expertise, trust, free choice of GP and a kind open attitude were highly valued. Spontaneous home visits were appreciated by some, but rejected by others. They preferred to receive verbal information rather than collecting information from leaflets. Distance to the practice and continuity of caregiver seemed to conflict for respondents. Preferences change in the process of ageing and growing health problems.

**Kenyans (2011)** study was done in Africa. The purpose of the study was to investigate physical activities for the level of functional independence amongst the elderly Kenyans in selected homes for the aged in Nairobi Province. The unit of measurement used is called a Metabolic Equivalent (MET), used to assess the intensities of physical activity patterns of the elderly. The results were expressed as a mean value of the METs in each of the physical activity categories. ADLs were measured by the Modified Barthel Index, scored on the basis of self-reporting by the subject to establish the Functional Independence Measure (FIM). This measure was used to establish the independence level of the elderly in performing ADLs and Mobility. A total of 144 out of 150 elderly residents were investigated in the study. The descriptive survey design employed a semi-structured interview and a number of standardized instruments. Major findings of the study were: There was a significant relationship between the MET intensities of physical activities and functional independence in ADLs and Mobility of the elderly. The study recommended that there is an imperative need for: development of more trained professionals in

exercise and recreational programs of the elderly by educational institutions; diversification of physical activity and recreational programs of the elderly in homes for the aged by the administrators, and regular fitness testing and evaluation for the elderly residents by the administrators to know their progression in attainment of fitness goals.

**FIGURE : 1 CONCEPTUAL FRAME WORK**



## CONCEPTUAL FRAME WORK

A conceptual frame work or a model is made up of concepts, which are the mental images of the phenomenon. This model provides the investigator the guidelines to proceed to attain the objectives of the study based on the theory.

**Imogene King's Goal Attainment Theory** is based on the personal and interpersonal systems including interaction, perception, communication, transaction, stress, growth and development, time and action.

The six major concepts of the phenomenon are described as follows:-

### 1. Perception

Perceptions vary from person to person. Different people perceive different things about the same situation. One might change one's perspective or simply make things mean something else.

In this study it refers to the senior citizens representation of reading. Hence the investigator's perception is the senior citizens may have lack of knowledge on reflexology.

### 2. Judgement

The cognitive process involves reaching a decision or drawing conclusions.

In this study it refers to the investigator judging that reflexology enhances the functional dependence level.

### 3. Action

It is a process or condition of acting or moving, as opposed to rest the doing of something; exertion of power or force, as when one body acts on another; the effect of power exerted on one body by another agency activity operation as the action of heat and a man of action.

The investigator implemented reflexology on the functional dependence of people. The senior citizens willing to gain knowledge and practice were included in the study.

### 4. Reaction

It is a bodily process occurring due to the effect of some foregoing stimulus or agent. For example "a bad reaction to the medicine" and "his responses has slowed with age".



The investigator and the senior citizens set mutual goals. It was done with North Wick Park Modified Scale.

#### **5. Interaction**

The transfer of energy between elementary particles or between an elementary particle and a field or between fields was considered.

Hence the investigator interacted with senior citizens by administering pre test and reflexology followed by post test.

#### **6. Transaction**

Transaction is the act of giving something in return for something received. For example "deductible losses on sales or exchanges of property are allowable action taken by a group of people"

In this study it refers to observable, purposeful behaviour of individual interactions with their environment.

**7. The positive outcome** is the improved functional ability in post test on functional independence level.

**8. The negative outcome** is the absence of improvement on functional ability of senior citizens where the subjects need to be reinforced for further learning.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

Research methodology is an endeavor to discover answers to problems, both intellectual and practical through the application of scientific method.

This chapter includes the description of research approach, research design, setting of the study, population, criteria for sample selection, method of sampling, description of the instrument, scoring procedure, validity, and reliability of the tool, data collection procedure, plan for data analysis, pilot study and protection of human rights.

#### **RESEARCH APPROACH**

An experimental approach was selected for this study to determine the effectiveness of touch therapy in reducing functional dependency among senior citizens who are institutionalized.

#### **RESEARCH DESIGN**

In this study, experimental design was adopted with one group pre test, post test and control group design. This study emphasizes randomization and manipulation and it has a control group and experimental group. The research design is an overall plan for obtaining answers to the research questions or for testing the research hypothesis.

#### **SETTING OF THE STUDY**

The study was conducted at Christian Mission Hospital in Madurai. Which is 6 Kms away from C.S.I. Jeyaraj Annapackiam College of Nursing. It is 350 bedded multi specialty hospital with health care facilities such as Causality, Neonatal intensive care unit, Intensive care unit, Medical and Surgical Wards, Pediatric ward, Geriatric care unit. Christian Mission Hospital serves all those in various status in the society.

## **POPULATION**

The target population includes institutionalized senior citizens. The accessible population is senior citizens in the geriatric care unit of the Christian Mission Hospital.

## **SAMPLE**

The samples for my study have been taken from the senior citizens residing in geriatric care unit at Christian Mission Hospital, those who fulfill the inclusive criteria.

## **SAMPLE SIZE**

The sample size was arbitrarily decided as 60, based on the availability of time and acquaintance of the investigator with the institution.

## **METHOD OF SAMPLING**

Samples for this study were selected through simple random sampling technique.

## **CRITERIA FOR SAMPLE SELECTION**

### **Inclusion criteria**

- Senior citizens - Age above 60 years.
- Both genders
- Who understands Tamil and English languages.

### **Exclusion criteria**

- Senior citizens with - Hearing impairments as reported by them.
- Who are critically ill and unconscious.
- And who refuse to participate in this study.

## **METHOD OF SAMPLING**

The samples of senior citizens residing in geriatric care unit were selected randomly on the basis of simple random sampling which was carried out using lot method.

## **DESCRIPTION OF THE TOOL**

After an extensive review of literature and in consultation with experts in the field, the investigator identified a number of associated risk factors responsible for functional independence among senior citizens those who were in geriatric care unit. The tool used for the present study, was an interview schedule. The functional independence was measured using Modified North Wick Park Scale which is a standardized tool.

The tool consists of two sections,

Section A: Demographic variables.

Section B: North Wick Park Scale (Modified.)

### **Section A-Demographic variables**

It consists of 10 items which includes age in years, gender (sex), religion, educational status, marital status, number of children, previous occupation, sources of income, duration in geriatric home and frequency of visitors.

### **Section B-Modified North Wick Park Scale for functional independence**

The Modified North Wick Scale is simple, valid tool measure functional independence level. The modified score is self reported by the seniors. It consists of following domains co-operation, mobility, bed transfer, toileting-bowels and bladder. bathing, dressing, eating and drinking, positioning, emotional stability. If one or more of these domains are present, then the senior is considered as functional independence lacking person.

## **SCORING PROCEDURE**

The maximum score is 21 and above and minimum 10. For the purpose of the study, the severity level of independence on the basis of obtained score was classified as follows:

**Severity score**

1-10

11-20

21and above

**Classification**

Mild independence.

Moderate independence.

Fully independence.

**VALIDITY**

The present tool was valued by 5 nursing experts and 1 medical expert. Experts were requested to judge the tool for its clarity, relatedness, sequences, meaningfulness and content. A few modifications were made as per suggestions given by the experts. Items with hundred percent agreements were included in the tool. The tool was developed in English language and its validity was established.

**PILOT STUDY**

The researcher conducted a pilot study before the main study to achieve the following objectives:

- To understand and handle the difficulties that may be encountered in the actual study.
- To become familiar with the use of the study.
- To find out the feasibility and application of the tool.
- To find out the sensitivity of the tool.

The pilot study was carried out in Inba illam, Old age Home located in the Pasumalai. After obtaining administrative approval from the authorities concerned, the researcher selected 6 samples of senior citizens as study sample using simple random sampling technique. After getting the consent from each person, the senior citizens spontaneously shared their difficulties in managing functional inability. The Researcher explained reflexology in terms of treating functional independence. A pre test was conducted for both experimental and control group. Reflexology was administered to experimental and post test was conducted for both the experimental and control group. The study was found to be feasible with regard to time, the availability of subjects and the cooperation of the samples. It also provided information regarding reliability, feasibility and practicability of the designed methodology.

The questions in the interview schedule had clarity and simplicity to the level of the study subjects. A few changes were made in the tool and the 15 days duration of reflexology administration was modified into 10 days with the approval of the experts. The result of the study, after computing the value showed that there were statistically significant improvements in the severity of functional independence level among senior citizens.

### **DATA COLLECTION PROCEDURE**

The study was done for a specified 6 weeks. Formal permission was sought and obtained from authorities of the geriatric care unit. The senior citizens who had functional inability were contacted personally. Samples for the study were recognized based on sample criteria and were selected by sampling technique using lottery method. A total of 60 senior citizens who had functional independence were employed in the study-30 in experimental group and 30 in control group. Data were collected in two spells.

Both the experimental and control group were assessed for the level of functional independence before the administration of reflexology with the help of Modified North Wick Park Scale. The reflexology was applied one time per day about 30 minutes in the morning for 7 days to the experimental group. It was demonstrated and supervised by a registered physiotherapist who is optional. Subsequently together groups were assessed for the level of functional independence, with the help of Modified North Wick Park Scale. The functions were determined and compared between the experimental and control group before and after administration of reflexology.

## DATA COLLECTION SCHEDULE

Number of Subjects	Pre Test	Time of Intervention	Days Interval	Post test
20	15/07/11		16 to 22/07/11	23/07/11
20	24/07/11	10.00 – 10.30 am	25 to 31/07/11	01/08/11
20	02/08/11		03 to 09/08/22	10/08/11

- Time spent to assess the severity level of functional independence level among senior citizens. (Pre test).
- Reflexology applied for 7 days at above mentioned time.
- Reassessed the functional independence level for the effectiveness (Post test).

### PLAN FOR DATA ANALYSIS

Data analysis helps the researcher to organize, summarize, evaluate, interpret and communicate the numerical facts. For the present study the collected data from the participants were grouped using both descriptive and inferential statistical methods. Statistical analysis was done by using SPSS 17.0 software.

Data analysis was carried out by means of following measures:

#### 1. Organize data in master sheet

#### 2. Descriptive Statistics application

Socio demographic variables and health variables were analyzed using frequency, percentage, mean and standard deviation.

#### 3. Inferential statistics application

Pre and post test difference was analyzed using paired t-test. Association between demographic variables and post test level of functional independence was analyzed using chi-square test.

### ETHICAL CONSIDERATION

Approval from the research committee and concerned authorities were obtained. Explanation regarding the purpose of reflexology was given. Informed written consent was obtained from the study participants and kept as confident throughout the study. Thus ethical issues were ensured in this study.

## **CHAPTER IV**

### **DATA ANALYSIS AND INTERPRETATION**

Using inferential and descriptive statistics based on the objectives of the study, the data were computed. The probability ('p') value less than 0.05 were considered as significant. Data collected on severity level of functional independence among senior citizens residing in geriatric care unit were analyzed, tabulated and interpreted.

The findings were presented in the form of tables and diagrams under the following series:

1. Distribution of senior citizens based on socio-demographic variables in the experimental and control group.
2. Distribution of senior citizens based on health variables.
3. Pre test level of functional independence among experimental group and control group.
4. Post test level of functional independence among control group and experimental group.
5. Reflexology mean score based on pre test and post test level among experimental and control group.
6. Difference between experimental group and control group regarding effectiveness of reflexology.
7. Association in the post test level of functional independence among experimental group with regard to socio-demographic variables.



**TABLE-1**  
**DISTRIBUTION OF DATA BASED ON DEMOGRAPHIC VARIABLES**

VARIABLE	SUB DIVISION	Experiment Group		Control Group	
		Frequency	Percentage	Frequency	Percentage
<b>AGE</b>	60-69yrs	11	37	7	23
	70-79yrs	13	43	16	53
	80-89yrs	5	17	5	17
	90 and above	1	3	2	7
<b>SEX</b>	Male	12	40	12	40
	Female	18	60	18	60
<b>RELIGION</b>	Christian	4	13	1	3
	Hindu	24	80	28	94
	Muslim	2	7	1	3
	Others	-	-	-	-
<b>EDUCATIONAL STATUS</b>	Uneducated	9	30	5	17
	Primary education	19	63	21	70
	Secondary education	2	7	1	3
	Graduate	-	-	3	10
<b>MARITAL STATUS</b>	Married	12	40	9	30
	Unmarried	1	3	1	3
	Divorce	17	57	1	3
	Widow	-	-	19	64
<b>NO.OF CHILDREN</b>	One	1	3	5	17
	Two	6	20	7	23
	Three and above	20	67	17	57
<b>PREVIOUS OCCUPATION</b>	Nil	3	10	1	3
	Self employee	5	17	5	17
	Government employee	3	10	5	17
	Private employee	7	23	4	13
	Unemployed	15	50	16	53

VARIABLE	SUB DIVISION	Experiment Group		Control Group	
		Frequency	Percentage	Frequency	Percentage
SOURCES OF INCOME	From children	25	83	21	70
	From grand children	3	10	2	7
	No income	-	-	1	3
DURATION IN GERIATRIC HOME	With in a week	3	10	-	-
	With in a month	6	20	5	17
	More than a month	16	53	14	50
FREQUENCY OF VISITORS	Often	14	47	21	70
	Occasional	9	30	5	17
	Rare	7	23	4	13
	No visitors	-	-	-	-

Table 1 reveals the Majority of senior citizens 13(43%) of them were in the age group of 70-79 years of age and the least 1(3%) of them were in the age group of 90 and above.

Majority of the senior citizens 18(60%) of them were in the females and least 12(40%) of them were males. Majority of senior citizens 24(80%) of them were Hindu religion and the least 2(7%) of them were Muslim religion. Majority of senior citizens 19 (63%) of them were in primary educational status, the least 2(7%) of them were in secondary education. Majority of senior citizens 17(57%) of them were divorce cases and the least 1(3%) of them were in unmarried status. Majority of senior citizens 20 (67%) of them were having three and above and least 1(3%)have one child.

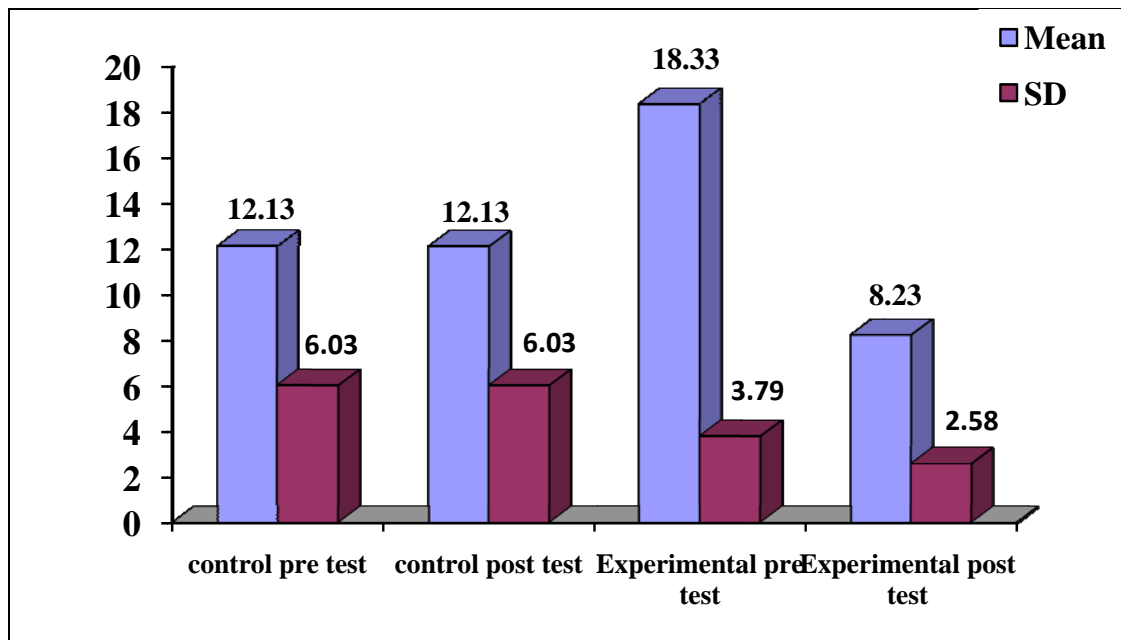
Majority of senior citizens 15 (50%) of them were unemployed and least 3( 10%)of them were Government employee. Majority of senior citizens 25 ( 83%) of them were getting source of income from their children and least 2 (7% ) of them were getting monthly pension. Majority of the senior citizens 16 ( 53%)of them are staying in geriatric home more than a month and least 3( 10%) of them are staying within a week Majority of the senior citizens 14 ( 47%) of them are getting frequent visitors and least 7 ( 23%) of them getting rare visitors.

It is inferred that the majority of the senior citizens were in the age group of 70-79. Most of them were males, belonging to Hindu religion, had primary educational status, unemployed and were widows and widowers, had more than three children and had visitors occasionally.

**FIGURE 2**

**REVEALS THAT OBTAINED MEAN DIFFERENCE BETWEEN THE PRE TEST AND POST TEST REGARDING FUNCTIONAL INDEPENDENCE SCORE WAS 18.33. THE OBTAINED 'T' VALUE WAS FOUND TO BE HIGHLY SIGNIFICANT. THEREFORE THE NULL HYPOTHESIS (H01) WAS REJECTED AND RESEARCH HYPOTHESIS WAS ACCEPTED.**

It is inferred that the senior citizens who were exposed to touch therapy had significant decrease in the post test functional independence score.



**FIGURE : 3:  
COMPARISON OF FREQUENCY WISE DISTRIBUTION FOR TOUCH  
THERAPY ON FUNCTIONAL INDEPENDENCE AMONG SENIOR  
CITIZENS IN CONTROL GROUP AT CHRISTIAN MISSION HOSPITAL**

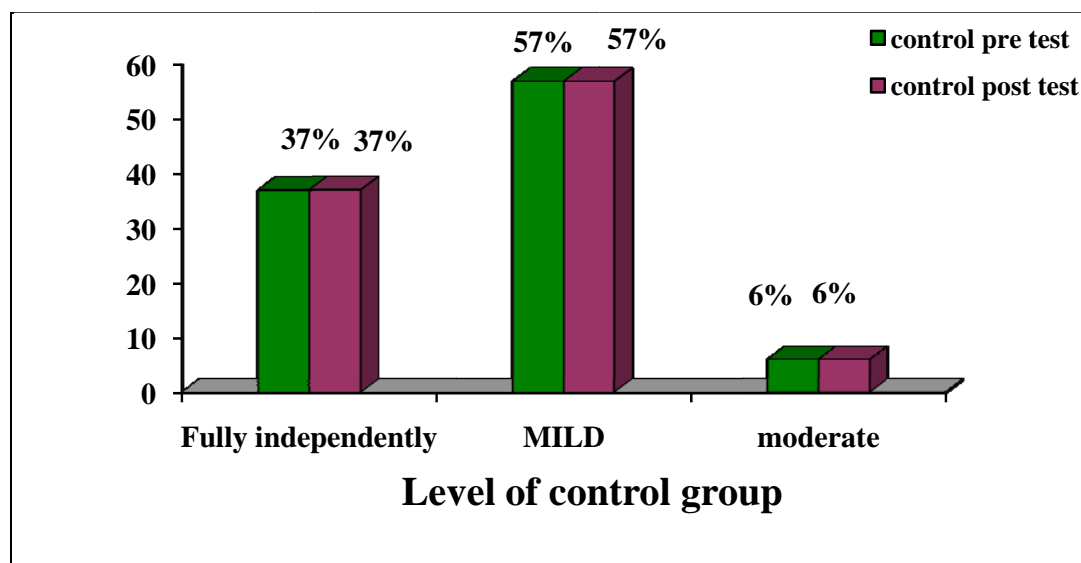


Figure 3- reveals the pre test and post test level of functional independence among institutionalized senior citizens. In the pre test, as well as in the post test, a majority of 17(57%)senior citizens were suffering from mild level of functional independence, 2(6%) and 11(37%) of them were moderate to fully independent level.

It was inferred that after touch therapy the level of functional independence among senior citizens was same for the control group.

**FIGURE 4:**  
**COMPARISON OF FREQUENCY WISE DISTRIBUTION FOR TOUCH THERAPY ON FUNCTIONAL INDEPENDENCE AMONG SENIOR CITIZENS IN EXPERIMENT GROUP AT CHRISTIAN MISSION HOSPITAL**

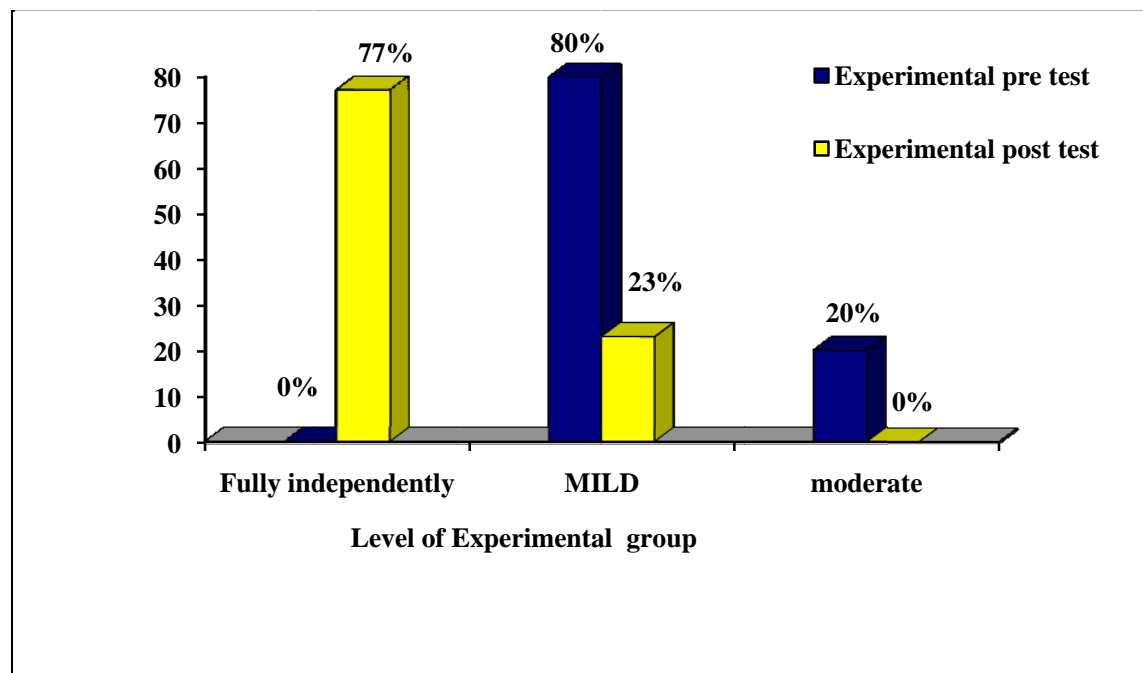


Figure 4-reveals that the pre test and post test level of functional independence among experimental senior citizens.

In the pre test, a majority of 24(80%) senior citizens were suffering from mild level of functional independence, 6(20%) of them were suffering from moderate level of functional independence.

In the post test, 23(77%) of them were suffered from fully independence, 7(23%) of them were mild independence, and none of them were moderate level of functional independence.

It was inferred that after touch therapy the level of functional independence among senior citizens was reduced from full to mild.

**TABLE 2.**  
**PAIRED ‘T’-TEST FOR OF TOUCH THERAPY ON FUNCTIONAL INDEPENDENCE AMONG SENIOR CITIZENS IN CONTROL GROUP AND EXPERIMENT GROUP.**

	Group	‘t’-test	P-value
overall	Experimental Pre test – Experimental post test	21.8***	0.000
	Control pre test – Control post test	0	1

(df = 29 , table value = 3.659 \*\*\* P<0.001 highly significant.)

Table-2 reveals that obtained pre test and post test ‘t’ value was found to highly significant. Therefore the null hypothesis was rejected and research hypothesis was accepted.

**TABLE 3.**

**UN- PAIRED ‘T’-TEST FOR TOUCH THERAPY ON FUNCTIONAL INDEPENDENCE AMONG SENIOR CITIZENS OF CONTROL GROUP AND EXPERIMENTAL GROUP.**

<b>LEVEL</b>	<b>GROUP</b>	<b>‘T’-TEST</b>	<b>P-VALUE</b>
overall	Experimental post test- control post test	3.258***	0.000
<b>(df = 58 , table value = 3.46 *** P&lt;0.001 highly significant.)</b>			

Table 3.reveals that obtained pre test and post test ‘t’ value was found to highly significant. Therefore the null hypothesis was rejected and research hypothesis was accepted.



**TABLE 4.**  
**ASSOCIATION BETWEEN TOUCH THERAPY ON FUNCTIONAL**  
**INDEPENDENCE AMONG SENIOR CITIZENS OF CONTROL GROUP IN**  
**POST TEST WITH THEIR SELECTED DEMOGRAPHIC VARIABLE.**

	<b>Demographic variable</b>	<b>Fully</b>	<b>Mild</b>	<b>Moderate</b>	$\chi^2$ <b>value</b>	<b>p-value</b>
<b>Age</b>	60-69yrs	0	6	1	12.49	0.052
	70-79yrs	10	6	0		
	80-89yrs	1	3	1		
	90 and above	0	2	0		
<b>Sex</b>	Male	6	5	1	1.847	0.397
	Female	5	12	1		
<b>Religion</b>	Christian	0	1	0	2.57	0.643
	Hindu	10	16	2		
	Muslim	1	0	0		
<b>Educationa l status</b>	Others	-	-	-	18.46**	0.005
	Uneducated	1	3	1		
	Primary education	8	13	0		
	Secondary education	0	0	1		
<b>Marital status</b>	Graduate	2	1	0	8.174	0.226
	Married	1	8	0		
	Unmarried	1	0	0		
<b>No. of children</b>	Divorce	1	0	0	4.22	0.647
	Widow	8	9	2		
	One	2	2	1		
	Two	2	5	0		
<b>Previous occupation</b>	Three and above	6	10	1	14.616*	0.023
	Nil	1	0	0		
	Self employee	4	1	0		
	Government employee	4	1	0		
	Private employee	1	2	1		
	Unemployed	2	13	1		

	Pension	4	2	0		
<b>Source of income</b>	From children	6	13	2		
	From grand children	0	2	0	6.44	0.376
	No income	1	0	0		
<b>Duration of geriatric home</b>	With in a week	-	-	-		
	With in a month	0	4	1		
	More than a month	2	12	1	19.58***	0.001
	More than a year	9	1	0		
<b>Frequency of visitors</b>	Often	8	11	2		
	Occasional	1	4	0		
	Rare	2	2	0	2.02	0.732
	No visitors	-	-	-		

**Key:-\*\*\* Highly significant.**

Table 4 reveals that the association between the level of functional independence and the educational status, employee status, staying at geriatric home by the senior citizens.

Chi-square value ( $\chi^2$ ) 19.58 ( P=0.001) shows that there is significant association between the level functional independence and the demographic variables. So null hypothesis rejected. Hence research hypothesis is accepted.

**TABLE 5**  
**ASSOCIATION BETWEEN TOUCH THERAPY ON FUNCTIONAL**  
**INDEPENDENCE AMONG SENIOR CITIZENS OF EXPERIMENTAL**  
**GROUP IN PRE TEST WITH THEIR SELECTED DEMOGRAPHIC**  
**VARIABLE.**

Demographic variable		Mild	Moderate	$\chi^2$ value	p-value
Age	60-69yrs	9	2	2.465	0.482
	70-79yrs	9	4		
	80-89yrs	5	0		
	90 and above	1	0		
Sex	Male	10	2	0.138	0.709
	Female	14	4		
Religion	Christian	4	0	2.14	0.344
	Hindu	19	5		
	Muslim	1	1		
	Others	-	-		
Educational status	Uneducated	6	3	1.711	0.425
	Primary education	16	3		
	Secondary education	2	0		
	Graduate	-	-		
Marital status	Married	9	3	0.496	0.780
	Unmarried	1	0		
	Divorce	14	3		
	Widow	-	-		
No. of children	one	0	1	4.687	0.196
	Two	5	1		
	Three and above	17	3		
	Nil	2	1		
Previous occupation	Self employee	4	1	1.309	0.727
	Government employee	3	0		
	Private employee	6	1		
	Unemployed	11	4		

	Pension	2	0		
Source of income	From children	20	5		
	From grand children	2	1	0.833	0.659
	No income	-	-		
Duration of geriatric home	With in a week	3	0		
	With in a month	3	3		
	More than a month	13	3	5.391	0.145
Frequency of visitors	More than a year	5	0		
	Often	11	3		
	Occasional	7	2		
	Rare	6	1	0.189	0.91
	No visitors	-			

Table 5 reveals that the no association between the level of functional independence and the duration in geriatric home by the senior citizens.

Chi-square value ( $\chi^2$ ) 5.31 ( $P > 0.145$ ) shows that there is no significant association between the level functional independence and the demographic variables. Hence research hypothesis is accepted.

**TABLE 6.**  
**ASSOCIATION BETWEEN TOUCH THERAPY ON FUNCTIONAL**  
**INDEPENDENCE AMONG SENIOR CITIZENS OF EXPERIMENTAL**  
**GROUP IN POST TEST WITH THEIR SELECTED DEMOGRAPHIC**  
**VARIABLE.**

	<b>Demographic variable</b>	<b>Fully</b>	<b>Mild</b>	<b><math>\chi^2</math> value</b>	<b>p-value</b>
<b>Age</b>	60-69yrs	9	2	5.37	0.146
	70-79yrs	9	4		
	80-89yrs	5	0		
	90 and above	0	1		
<b>Sex</b>	Male	10	2	0.497	0.481
	Female	13	5		
<b>Religion</b>	Christian	2	1	1.12	0.57
	Hindu	20	5		
	Muslim	1	1		
<b>Educationa l status</b>	Others	-	-	1.351	0.509
	Uneducated	7	1		
	Primary education	15	5		
	Secondary education	1	1		
<b>Marital status</b>	Graduate	-	-	0.954	0.621
	Married	10	2		
	Unmarried	1	0		
	Divorce	12	5		
<b>No.of children</b>	Widow	-	-	5.311	0.15
	One	0	1		
	Two	6	0		
	Three and above	15	5		
<b>Previous occupation</b>	Nil	2	1	0.612	0.892
	Self employee	4	1		
	Government employee	2	1		
	Private employee	6	1		
	Unemployed	11	4		

	Pension	1	1		
<b>Source of income</b>	From children	20	5		
	From grand children	2	1	1.118	0.572
	No income	-	0		
<b>Duration of geriatric home</b>	With in a week	2	0		
	With in a month	4	3		
	More than a month	12	4	3.647	0.302
	More than a year	5	0		
<b>Frequency of visitors</b>	Often	9	5		
	Occasional	8	1		
	Rare	6	1	2.27	0.321
	No visitors	-	-		

Table 6 reveals that there is association between the level of functional independence and the age, no of children by the senior citizens.

Chi-square value ( $\chi^2$ ) 5.37 (  $P>0.146$ ) shows that there is significant association between the level functional independence and the demographic variables. So that null hypothesis rejected.Hence research hypothesis is accepted.

## CHAPTER- V

### DISCUSSION

"The healing of ourselves as healers has to take place first. Bringing ourselves to wholeness, we become more sensitive to other people. In the change of consciousness that happens within us, we bring about change of consciousness in those around us and in the planet itself."

**-Marion Woodman**

The study was conducted to evaluate the effectiveness of reflexology on the level of functional independence among senior citizens residing in geriatric care unit. The Investigator found, there was notable reduction in functional independence.

The discussion is based on the objectives of the study:

**The first objective was to assess the functional independence level among senior citizens residing in geriatric care unit before touch therapy**

Modified North wick park scale was used to assess the level of functional independence among senior citizens residing in geriatric care unit. Among 30 experimental group 24(80%) had mild functional independence, and 6(20%) had moderate level of functional independence, and in the control group 11(37%) fully independent, 17(57%) mild independent and 2(6%) moderate level of independent

The above findings was supported by Lázaro Alquézar A, (2007) study is quantifying the degree of functional dependence for daily living activities (DLA) and identifying the personal traits related there to individuals age of 65 and above who are living at home and attend Community Practically one out of every ten non-institutionalized individuals 65 years of age or over, shows a severe deterioration of their functional capacity.

**The second objective was to evaluate the effectiveness of touch therapy upon functional independence after touch therapy**

Among the 30 in the experimental group Table 4.2.2. Reveals In the post test, 23 (77%) of them suffered from fully independence, 7 (23%) of them had mild independence, and none of them had moderate level of functional independence.

It was inferred that after touch therapy the level of functional independence among senior citizens was reduced from full to mild.

The above findings was supported by Santana Mda (2009). One who conducted a study in North-Eastern Brazil. A convenience, non-probabilistic, census-dependent method was used for obtaining the sample of 62 people aged 50 to 78. Analyzing the replies led to three types of elements being identified which were related to the social representation of physical activity as attributed by the elderly: a psychological dimension (represented by happiness, well-being), a social dimension (dancing) and a biophysical dimension (gymnastics, water-gymnastics and health). The subjects reported a positive association between physical activity, social interaction and well-being. The elderly also believed in the effects of physical activity's on physical-motor aspects and health. The social representation of physical activity by the group being studied was close to the bio psychosocial dimension of physical activity.

**The third objective was to find out the association between the touch therapy on functional independence with selected demographic variables**

Associated study was done by Kenyans (2011) done in Africa to investigate physical activities for the level of functional independence with the touch therapy. The study recommended that there is an imperative need for: development of more trained professionals in exercise and recreational programs of the elderly by educational institutions; diversification of physical activity and recreational programs of the elderly in homes for the aged by the administrators, and regular fitness testing and evaluation for the elderly residents by the administrators to know their progression in attainment of fitness goals.



Chi-square value ( $\chi^2$ ) 5.37 (P >0.146) shows that there is significant association between the level functional independence and the demographic variables. So that null hypothesis rejected, and the research hypothesis is accepted.

### **LIMITATION**

The investigator felt that the control group might lack something during the course of the study, hence the Investigator demonstrates reflexology on functional dependence ability to the control group later.

## **CHAPTER- VI**

### **SUMMARY AND RECOMMENDATIONS**

The essence of any research project lies on reporting and finding. This chapter gives a brief account of the present study including conclusions drawn from the findings, recommendations, limitations of the study, suggestions for future studies and nursing implications.

#### **SUMMARY**

The focus of the study was to evaluate the effectiveness of touch therapy on functional Independence among senior citizens residing in geriatric care unit of Christian Mission Hospital, Madurai- 2012. The research design selected for the study was experiment in nature. The Conceptual Frame work of the study was based upon King's Goal Attainment Theory by **Imogene King (1960)**.

The structured interview schedule used for data collection and tool was a Modified North Wick Park Scale for functional dependence which is standardized. A simple random sampling technique was used to select samples. Data collected over a period of six weeks. Data collection was planned and data were gathered using by a structured interview schedule. The main study was conducted at geriatric care unit of Christian Mission Hospital, Madurai. Descriptive and inferential statistics applied to analyze the data. The data were presented with using tables and graphs.

#### **MAIN FINDING OF THE STUDY**

There was a significant improvement in the level of functional independence score after touch therapy.

The over all functional independence score was 18.33(SD 3.79) before touch therapy. Chi-square value ( $\chi^2$ ) 5.37 (  $P>0.146$ ) shows that there is a significant association between the level functional independence and the demographic variables. So that null hypothesis rejected and research hypothesis accepted.

## **CONCLUSION**

1. The majority of the senior citizens had moderate level of functional independence before reflexology.
2. Touch therapy was administered for 7 days, half an hour in the morning for each person according to their ability.
3. After giving reflexology for a week, the majority of the senior citizens had a reduction in the level of functional independence from moderate to mild.
4. There was no significant association between the level of functional dependence and the age, sex, religion, educational status, marital status, number of children, and the frequency of visitors

## **NURSING IMPLICATION**

### **Nursing Practice:**

1. It is the responsibility of the nursing personal to offer care to the senior citizens with functional independence.
2. Demonstration programme can be organized periodically in geriatric care unit to improve the self care activity

### **Nursing administration:**

1. Administrative staff should have understanding about the felt needs and care of elderly people not only in the hospital but also in the home.
2. This study also suggests that nurse administrators should conduct in service education for the nursing staff regarding common problem of old age people and their management.
3. The findings of this study emphasize the nurse administrators should make plan to increase resources to support and maintain health care facilities of the senior citizens.
4. These findings will help the administrators to encourage the nurses to implement touch therapy.

**Nursing Education:**

1. This study pushes the nursing curriculum to provide opportunities for student to learn about geriatric care.
2. This study promotes nursing specialization in geriatric nursing.
3. This study enables the students to acquire knowledge about touch therapy-reflexology and its uses.
4. Functional dependency is a existing problem, the nursing students should be taught regarding touch therapy importance.

**Nursing Research:**

1. As the aging population has significantly increased, more research could be conducted in the area of geriatrics.
2. Different ways of caring the aged is explored.
3. Nursing theories must be formulated regarding geriatric care based on new evolving research.
4. The learning module developed by the researcher can be used as a blue print for further investigator to develop more effective instructional like CD's, cassette, hand out and learning packages.

**RECOMMENDATIONS**

This study recommends the following suggestions

1. A similar study can be conducted for other age group with large sample size.
2. This study can be conducted to find the influencing factors functional dependency among senior citizens.
3. A comparative study can be done between functional dependency and independency group using not only subjective tool but with objective scale.
4. A similar study can be replicated for longer period of about one month for more reliability and effectiveness.

**MODIFIED NORTHWICK PARK DEPENDENCY SCALE****For each item, circle the applicable score**

<b>S.NO</b>	<b>content</b>	<b>score</b>
<b>1</b>	<b>CO-OPERATION</b>	
1.	Able to co-operate well independently.	3
2.	Able to understand well about the need of basic care	2
3.	Need help from one person to explain.	1
4.	Unable to co-operate fully.	0
<b>2.</b>	<b>MOBILITY.</b>	
1.	Walks fully independently.	3
2.	Walks with assistance.	2
3.	Uses wheel chair for mobilization.	1
4.	Unable to sit completely.	0
<b>3.</b>	<b>BED TRANSFER.</b>	
1.	Fully independent	3
2.	Requires help from one person.	2
3.	Require help from two people.	1
4.	Need stretcher or trolley for transfer.	0
<b>4.</b>	<b>TOILETING( Bladder)</b>	
1.	Able to empty bladder independently.	3
2.	Needs help from one person	2
3.	On condom drainage ( temporary)	1
4.	On continuous bladder drainage (folly catheter).	0

<b>5.</b>	<b>TOILETING (Bowels)</b>	
1.	Able to empty their bowels independently.	3
2.	Needs help from one person.	2
3.	Using bedpan/ commode	1
4.	Once in two days digital evacuation needed.	0
<b>6.</b>	<b>BATHING</b>	
1.	Able to have bathroom bath independently.	3
2.	Needs help from one person.	2
3.	Always need two person .	1
4.	Need sponge bath daily.	0
<b>7.</b>	<b>DRESSING.</b>	
1.	Able to dress independently.	3
2.	Need little assistance from one person.	2
3.	Need help from two people.	1
4.	Dependent completely.	0
<b>8.</b>	<b>EATING AND DRINKING.</b>	
1.	Able to eat with hand.	3
2.	Need help for spoon feed.	2
3.	Always on Naso-gastric feed.	1
4.	Fully dependent on Parenteral feed.	0
<b>9.</b>	<b>POSITIONING</b>	
1.	Able to position independently.	3
2.	Need help from one person to turn on sides.	2

3.	Need help from two people to turn on sides.	1
4.	Fully dependent	0
10.	<b>EMOTIONAL STABILITY</b>	
1.	No anxious.	3
2.	Often i need assistant.	2
3.	At night time only i need one person to be with me.	1
4.	Always I need people to be with me.	0

SCORING THE ABOVE ITEM WILL BE AS FOLLOWS;-

- Score of **1-10** shows **mild independence**
- Score of **11-20** shows **moderate independence.**
- Score of **21 and above** shows **fully independence.**

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## INTERNET

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- [http// www.ncbi.nlm.gov/gov/pubmed.com](http://www.ncbi.nlm.gov/gov/pubmed.com)-geriatric care
- [http//www. Nursing journals.co.in](http://www.Nursingjournals.co.in)-reflexology on senior citizens.
- [www.functionalability.com](http://www.functionalability.com).senior citizens ability
- [www.reflexology.com](http://www.reflexology.com).care on senior citizens.
- [www.touchtherapy.co.in](http://www.touchtherapy.co.in)
- [www.healthyseniors.com](http://www.healthyseniors.com).

## APPENDIX-1

**From**

**X. John Lucy Mary,**  
II year M.Sc (N) Student,  
C.S.I. Jeyaraj Anna Packiam College of Nursing,  
Pasumalai, Madurai-4.

**To**

**Forwarded Through:**

The Principal,  
C.S.I. Jeyaraj Anna Packiam College of Nursing,  
Pasumalai, Madurai-4.

**Respected Madam,**

**Sub: Requisition for opinions and suggestions of experts for establishing content validity of research tool.**

With due regards, I kindly bring to your knowledge that I am a post graduate student of the C.S.I. Jeyaraj Anna Packiam College of Nursing, Madurai. I have selected the **below mentioned topic** for dissertation to be submitted to the Tamil Nadu Dr. M.G.R. Medical University, Chennai as a part of partial fulfillment of Master of Nursing Degree.

**“A study to evaluate the effectiveness of Touch therapy on functional independence among senior citizens in Christian mission hospital, at Madurai-2012”.**

With regards I humbly request you to validate my study instruments. I will be grateful to you, if you do this favor to me as early as possible.

Thanking you

Date:

Yours Sincerely,

Place: Madurai

**X. John Lucy Mary**

## APPENDIX – II

1. Prof. Mrs. JayaThanga Selvi. Msc(N), **PhD.**,  
Professor, HOD in Médical & Surgical Nursing  
C.S.I. Jeyaraj Anna Packiam collage of nursing,  
Pasumalai-4.
2. Mrs. Jancy Racheal, Msc(N), **PhD.**,  
Reader in Psychiatric nursing.  
C.S.I. Jeyaraj Anna Packiam collage of nursing,  
Pasumalai-4.
3. Lecturer. Mrs.Jeyajothi, Msc(N)  
Lecturer in Medical & surgical nursing.  
C.S.I. Jeyaraj Anna Packiam collage of nursing,  
Pasumalai-4.
4. Lecturer.Anbu Roselin,Msc(N),  
Lecturer in Medical & surgical nursing.  
C.S.I. Jeyaraj Anna Packiam collage of nursing,  
Pasumalai- Madurai.
5. Dr. A. Charles Stephen Rajasingh,MS.,MCh  
Médical Director,  
Christian Mission Hospital,  
Madurai.
6. Dr.Helen Perdita, M.Sc(N) Ph.D.,  
Principal,Apollo College Of Nursing  
Madurai.
7. Mrs.Jasline,M.Sc(N).,  
Professor,Matha College Of Nursing  
Manamadurai.

8. Mrs.Parameswari,M.Sc(N),  
Professor,Christian College Of Nursing  
Ambilikai.
  
9. Dr.Vijaya Rani Prince,M.Sc(N),Ph.D.,  
Principal,Bishop College Of Nursing  
Dharapuram.

## APPENDIX -III

### FROM

MS.X. John Lucy Mary,  
11 year Msc (N) Student,  
C.S.I.Jeyaraj Anna Packiam college of nursing,  
Merry dew hills, Jonespuram,  
Pasumalai-625 004.

### THROUGH

The Principal,  
C.S.I.Jeyaraj Anna Packiam college of nursing,  
Merry dew hills, Jonespuram,  
Pasumalai-625 004.

### TO

THE MEDICAL DIRECTOR,  
THE CHRISTIAN MISSION HOSPITAL,  
EAST VELI STREET, Madurai- 625001.

**Respected sir,**

**Subject:-seeking permission to conduct the pilot study regarding,**

With due regards, I am a post graduate student of C.S.I .Jeyaraj Anna packiam college of nursing, Pasumalai, selected the below mentioned topic for research project, to be submitted to the Tamil Nadu Dr.M.G.R. Medical University, Chennai as a partial fulfillment of Master of Nursing Degree.

**“A study to evaluate the effectiveness of touch therapy on functional independence among senior citizens in Christian mission hospital, at Madurai-2012”**

I request your goodness to grant me permission to conduct the study of pilot study in your esteemed institution.

Thanking you.

Place :- Madurai

Yours Sincerely

Date :-

**X.John Lucy Mary.**

## **APPENDIX –IV**

### **INFORMED CONSENT**

I clearly understood about the importance of reflexology to improve the level on functional independence. The length of administration is explained in detail. There by I am willing to participate and would co-operate.

**Signature of the senior citizen**

## DEMOGRAPHIC DATA

### Instruction:-

The following items seek information about you. Kindly choose the appropriate. The data will be kept confidential.

#### 1. Age.

1. 60 -69 years.
2. 70-79 years.
3. 80-89 years.
4. 90 and above.

#### 2. Sex.

1. Male.
2. Female

#### 3. Religion.

1. Christian .
2. Hindu.
3. Muslim.
4. Others.

#### 4. Educational status.

1. Illiterate.
2. Primary education.
3. Secondary education.
4. Graduation.

#### 5. Marital status. .

1. Married.
2. Unmarried.
3. Divorcee.
4. Widow.

**6. Number of children.**

1. One.
2. Two.
3. Three and above.
4. Nil.

**7. Level of physical dependence.**

1. Fully dependent.
2. Partially dependent.
3. Independent

**8. Frequency of visitors.**

1. Often.
2. Occasional.
3. Rare.
4. No visitors.

**9. Previous occupation.**

1. Labour.
2. Government employee.
3. Private employee.
4. Unemployed.

**10. Source of Income.**

1. Pension.
2. From children.
3. From grand children.
4. No income.



## MODIFIED NORTHWICK PARK DEPENDENCY SCALE

For each item, circle the applicable score

CONTENT	Score
<b>CO-OPERATION</b>	
Able to co-operate well independently.	3
Able to understand well about the need of basic care	2
Need help from one person to explain.	1
Unable to co-operate fully.	0
<b>MOBILITY.</b>	
Walks fully independently.	3
Walks with assistance.	2
Uses wheel chair for mobilization.	1
Unable to sit completely.	0
<b>BED TRANSFER</b>	
Fully independent	3
Requires help from one person.	2
Require help from two people.	1
Need stretcher or trolley for transfer.	0
<b>TOILETING( Bladder)</b>	
Able to empty bladder independently.	3
Needs help from one person	2
On condom drainage ( temporary)	1
On continuous bladder drainage (folly catheter).	0
<b>TOILETING (Bowels)</b>	
Able to empty their bowels independently.	3
Needs help from one person.	2
Using bedpan/ commode	1
Once in two days digital evacuation needed.	0
<b>BATHING</b>	
Able to have bathroom bath independently.	3
Needs help from one person.	2
Always need two person .	1

Need sponge bath daily.	0
<b>DRESSING.</b>	
Able to dress independently.	3
Need little assistance from one person.	2
Need help from two people.	1
Dependent completely.	0
<b>EATING AND DRINKING.</b>	
Able to eat with hand.	3
Need help for spoon feed.	2
Always on Naso-gastric feed.	1
Fully dependent on Parenteral feed.	0
<b>POSITIONING</b>	
Able to position independently.	3
Need help from one person to turn on sides.	2
Need help from two people to turn on sides.	1
Fully dependent	0
<b>EMOTIONAL STABILITY</b>	
No anxious.	3
Often i need assistant.	2
At night time only i need one person to be with me.	1
Always I need people to be with me.	0

SCORING THE ABOVE ITEM WILL BE AS FOLLOWS;-

- Score of **1-10** shows **mild independence**
- Score of **11-20** shows **moderate independence.**
- Score of **21 and above** shows **fully independence.**



## STEPS ON TOUCH THERAPY(BOTH UPPER AND LOWER LIMP)



Rotate the joint of each finger,  
gentle massage can be applied



Hold well with right hand and  
gentle massage with other hand.



Same massage can be applied  
to each finger.



Gentle pressure can be given  
on the wrist joint.



Give gentle massage palm of  
the hand.



Gentle pressure can be applied  
over the nap of the fingers.



Gentle massage can be given from wrist joint to elbow.



Firm pressure can be applied over the dorsal of the foot.



Gentle massage can be applied over the nap of the toes.



Gentle pressure can be applied over the sides of the big toe.



Gentle massage can be applied over the entire feet.



Firm pressure can be given from dorsal of the foot to knee joint.