AN OBSERVATIONAL STUDY TO EVALUATE THE IMPROVEMENT IN QUALITY OF LIFE OF THE ELDERLY BY PRACTICE OF ASANA, PRANAYAMA, AND DHYANA

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Rajiv Gandhi University of Health Sciences, Bangalore

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LIST OF ABBREVIATIONS

Sl.No.	Abbreviated Forms	Full Forms
1	UNFPA	United Nations Population Fund
2	WHO	World Health Organization
3	UN	United Nations
4	DNA	Deoxyribonucleic acids
5	TERC	Telomerase RNA [ribonucleic acid] component
6	ROS	Reactive Oxygen Species
7	ETC	Electron Transport Chain
8	NPHCE	National Programme for the Health Care of Elderly
9	PHC	Primary Health Care Centre
10	CHC	Community Health Care Centre
11	ADL	Activities of daily Life
12	IEC	Information, education and Communication
13	NCD	Non Communicable disease
14	BCE	Before the Common Era
15	MRP	Material requirement Planning
16	SYM	Sahaja Yoga Meditation

LIST OF FIGURES

LIST OF GRAPHS

LIST OF TABLES

TABLE OF CONTENTS

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ABSTRACT

Background and Objectives: Ageing is a natural inevitable irreversible, always progressive biological process associated with decline of physical and mental functions. The main objective of the study is to evaluate the effects of asana, pranayama and dhyana on improvement of overall quality of life of older individuals and also the improvement in following domains: Physical health, Psychological health, Social relationships and Environment.

Methods: Total 30 participants were screened and registered for this study as per the protocol. The intervention given to the subjects are asana, pranayama and Dhyana for 15 days for trial group and a control group was designed for which no intervention was given. The trial and control group were assessed with the help of the WHOQOL-Bref scale.

Once the study was completed the data recorded in the case sheet were analyzed and tabulated. The analysis was done using SPSS software.

Results: The overall result shows no significant change in the quality of life of the elderly individuals statistically but clinically there was improvement in their day to day activity. There was a significant improvement seen in all domains that is physical health, psychological health, social relationships and environmental health.

Interpretations and Conclusions: These results imply that the intervention, if continued and for longer duration, could've provided better results both statistically and clinically.

Keywords: Ageing, Quality of life, Asana, Pranayama, Dhyana

1. INTRODUCTION

Aging can be defined as the time-related deterioration of the physiological functions necessary for survival and fertility.[1] **Ageing is a natural inevitable** irreversible, always progressive biological process associated with decline of physical and mental functions. Ageing occurs at different levels-social, behavioral, physiological, morphological, cellular and molecular. Many systematic and molecular problems are common in old age due to structural and functional changes of the body. Old age brings with it many problems, of these; health is the most important and directly imprints on quality of life.

The problem of ageing is a global one. It is experienced by both poor and rich countries. The proportion of older people has been increasing alarmingly in INDIA and worldwide. The average life span of a person has increased from 32 years in 1947 to 65 years in 2005 and expected to increase to 75 years by 2015. The total population of elderly is expected to cross 177 million in the year 2025. The tremendous advance in biological and medical science has succeeded in controlling many diseases and has decreased the rate of death. Research has decreased the death rate of young people at the same time, pushed a large number of people into the period of old age.

Normal aging:People often wonder whether what they are experiencing as they age is normal or abnormal. Although people age somewhat differently, some changes result from internal processes, that is, from aging itself. Thus, such changes, although undesired, are considered normal and are sometimes called pure aging. These changes occur in everyone who lives long enough, and that universality is part of the definition of pure aging. They are to be expected and are generally unavoidable.

Healthy (successful) aging:Healthy aging refers to postponement of or reduction in the undesired effects of aging. The goals of healthy aging are maintaining physical and mental health, avoiding disorders, and remaining active and indep-endent. For most people, maintaining general good health requires more effort as they age. Developing certain healthy habits can help, such as-

- Following a nutritious diet
- Exercising regularly
- Staying mentally active[2]

The lifespan of man has increased, as compared to the olden days, and everyone aims to have a quality life during their last few years. Ageing prevents one's mobility and ability to do daily chores unless they have been active physically. Decreased mobility and sedentary lifestyle leads to ailments and that further leads to reduced movements.

Physical activity, healthy eating, healthy mindset, safe environment to live, social and family support is well needed during oldage. To prolong life, one needs to maintain healthy living habits. Hence, to improve the quality of life to an optimum level interventions like yoga are given. This study intends to look into the effects of yoga on quality of life of the older people.

2. OBJECTIVES

Elderly individuals are the heritage of the nation. They have lived and experienced a lot which then they teach their children. To preserve the health of these individuals is of great importance to the nation as a whole. To achieve this we must see the overall health of the individual, and not just physical.

The main objective of the study is to evaluate the effects of asana, pranayama and dhyana on improvement of overall quality of life of older individuals and also the improvement in following domains:

- Physical health
- Psychological health
- Social relationships
- Environment

3. REVIEW OF LITERATURE

People worldwide are living longer. Today most people can expect to live into their sixties and beyond. Every country in the world is experiencing growth in both the size and the proportion of older persons in the population[3].

Ageing is both a biological and psychosocial change. Psychosocial changes occur as a person's role in society evolves, and they often also adapt their goals and motivational priorities[4]. At a biological level, ageing is the gradual biological impairment of normal function, as a result of changes made to cells and structural components. These changes would consequently have a direct impact on the functional ability of organs, biological systems and ultimately the organism as a whole. Normal ageing is that which occurs without disease[5].

The following is a starting point for considering the span of old age:

1) Between 60 – 75 years = young old

2) Between 75 – 85 years = old

3) Those more than 85 years are considered the frail older population[5].

Old age statistics:

Globally there were 727 million persons aged 65 years and over in the world in 2020[6]. According to the State of World Population 2019 report by the United Nations Population Fund (UNFPA), India's population in 2019 stood at 1.36 billion, growing from 942.2 million in 1994 and six per cent of India's population was of the age 65 and above[7].

Mysuru :

Percentage of total rural aged population to total population-8.5%

Percentage of rural male aged population to total male population-8%

Percentage of total female aged population to total rural female population[6]-9%

The World Health Organization(WHO), created a 'Global Strategy and Action Plan for Ageing and Health for 2016-2020' and its continuation with WHO programme 'The Decade of Healthy Ageing 2020-2030'[8]. The Year 1999-was called 'The Year of Older Persons' by the UN. In India, National Policy for Older Persons-1999 was constituted to promote health and welfare of senior citizens[9].

Common health conditions associated with ageing:

Common conditions in older age include hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, chronic obstructive pulmonary disease, diabetes, depression and dementia. As people age, they are more likely to experience several conditions at the same time[3].

Older age is also characterized by the emergence of several complex health states commonly called geriatric syndromes. They are often the consequence of multiple underlying factors and include frailty, urinary incontinence, falls, delirium and pressure ulcers[3].

The ageing process is different for everyone, and there is no strict list of events that are guaranteed to happen. However, everyone will go through some age-related changes, and most will require assistance from family, friends, or formal caregivers, which is likely to increase as they progress through the stages of ageing[10].

The Stages of Ageing:

Experts generally break down the ageing process into 5 stages:

- Stage 1: Independence
- Stage 2: Interdependence
- Stage 3: Dependency
- Stage 4: Crisis Management
- Stage 5: End of Life

Stage 1: Independence

During this early stage of the ageing process, the vast majority of older adults will stay in their own home. At this stage, they can still look after all of their needs such as transportation, finances and health care. They may have experienced a minor decline in mental and physical ability, but not enough to have an impact on their life. An older adult is still in good health with a high quality of life at this point.

Older adults in this stage likely won't need much help in terms of caregiving but it may be a good time to talk to them about what they may need in the future and make necessary changes in preparation.

Stage 2: Interdependence

In stage 2, older adults are likely to start finding everyday tasks more difficult. Physical and mental activity will both decline, and they may start to forget things. During stage 2, they will be able to do many things on their own but not everything, and as such, their quality of life is likely to suffer if they do not have assistance.

A caregiver may be necessary to assist with one or more activities, such as driving, shopping, or paying bills. This can be one of the more difficult stages of ageing, as the older adult may be resisting asking for help, or may not feel comfortable engaging a

formal caregiver. Offering regular help with the tasks that you notice they are struggling with is the most valuable course of action at this stage. It's also important to ensure the older person is staying on top of any medicines that they have to take for conditions they may have.

Stage 3: Dependency

By stage 3, age-related changes are becoming more noticeable, and an older adult is likely to be experiencing difficulty doing a number of everyday tasks by themselves. Many older adults will be having more difficulty with physical and mental activity, and as such, it may no longer be appropriate for them to drive or travel to places independently.

The quality of life for older adults will be significantly impacted in the 'Dependency' stage, and as such, they will start to need more notable caregiving assistance. In some cases, this assistance will come from a professional healthcare provider, and in others, a family caregiver may take on the role. A caregiver may manage the older adult's medication, monitor their physical condition and prepare meals. It may be necessary to make modifications to the home to ensure the safety of the older adult; for example, an emergency medical alert system may be necessary.

Stages 4 & 5: Crisis Management and End of Life

If a senior reaches the point of crisis management and end of life care, they will typically need to be monitored round the clock, as well as having access to formal health care facilities. At this point, it may be appropriate for the older adult to be in an assisted living facility, nursing home, or hospice.

THEORIES OF AGEING:

Ageing, progressive physiological changes in an organism that lead to senescence, or a decline of biological functions and of the organism's ability to adapt to metabolic stress[11].

Aging takes place in a cell, an organ, or the total organism with the passage of time.

Biological theories of aging:

Aging has many facets. Hence, there are a number of theories, each of which may explain one or more aspects of aging. There is, however, no single theory that explains all of the phenomena of aging.

1) Genetic theories:

One theory of aging assumes that the life span of a cell or organism is genetically determined—that the genes of an animal contain a "program" that determines its life span, just as eye colour is determined genetically. This theory finds support in the fact that people with parents who have lived long lives are likely to live long themselves. Also, identical twins have life spans more similar in length than do non-twin siblings.

The genetic theory of aging centres on telomeres, which are repeated segments of DNA (deoxyribonucleic acid) occurring at the ends of chromosomes. The number of repeats in a telomere determines the maximum life span of a cell, since each time a cell divides, multiple repeats are lost. Once telomeres have been reduced to a certain size, the cell reaches a crisis point and is prevented from dividing further. As a consequence, the cell dies.

Research has shown that telomeres are vulnerable to genetic factors that alter an organism's rate of aging. In humans, variations in a gene known as TERC(telomerase RNA[ribonucleic acid] component), which encodes an RNA segment of an enzyme known as telomerase, have been associated with reduced telomere length and an increased rate of biological aging. Telomerase normally functions to prevent the overshortening of telomeres, but in the presence of TERC mutations the enzyme's activity is altered. TERC also appears to influence the telomere length that individuals possess from the time of birth. Persons who carry TERC variations are believed to be several years older biologically compared with noncarriers of the same chronological age. This accelerated rate of biological aging is likely also influenced by exposure to environmental factors, such as smoking and obesity, which increase a carrier's susceptibility to the onset of age-related diseases relatively early in adult life.

Mutations of genes that affect telomere length lend support to another genetic theory of aging, which assumes that cell death is the result of "errors" introduced in the formation of key proteins, such as enzymes. Slight differences induced in the transmission of information from DNA molecules of the chromosomes through RNA molecules(the "messenger" substance) to the proper assembly of the large and complex enzyme molecules could result in a molecule of the enzyme that would not "work" properly. This is precisely what happens in the instance of mutations in the TERC gene. Such mutations disrupt the normal function of the telomerase enzyme.

As cells grow and divide, a small proportion of them undergo mutation. This change in the genetic code is then reproduced when the cells again divide. The "somatic mutation" theory of aging assumes that aging is due to the gradual accumulation of mutated cells that do not perform normally.

2) Non genetic theories:

Age changes are much more marked in the overall performance of an individual than in cellular processes that can be measured. The age decrement in the ability to perform muscular work is much greater than any changes that can be detected in the enzyme activities of the muscles that perform the work. It is possible that aging in an individual is actually due to a breakdown in the control mechanisms that are required in a complex performance. Aging could also be the result of an accumulation in cells of damaging reactive molecules produced as byproducts of day-to-day cellular activities, such as cellular respiration. Other nongenetic theories consider aging as a complex psychosociological process.

- **Wear-and-tear theory:**

The "wear-and-tear" theory assumes that animals and cells, like machines, simply wear out. Animals, however, unlike machines, have some ability to repair themselves, so that this theory does not fit the facts of a biological system. A corollary to the wear-and-tear theory is the presumption that waste products accumulate within cells and interfere with function. The accumulation of highly insoluble particles, known as "age pigments," has been observed in muscle cells in the heart and nerve cells of humans and other animals.

- **Cross-linking theory:**

With increasing age, tendons, skin, and even blood vessels lose elasticity. This is due to the formation of cross-links between or within the molecules of collagen (a fibrous protein) that give elasticity to these tissues. The "cross-linking" theory of aging assumes that similar cross-links form in other biologically important molecules, such

as enzymes. These cross-links could alter the structure and shape of the enzyme molecules so that they are unable to carry out their functions in the cell.

- **Autoimmune theory:**

Another theory of aging assumes that immune reactions, normally directed against disease-producing organisms as well as foreign proteins or tissue, begin to attack cells of the individual's own body. In other words, the system that produces antibodies loses its ability to distinguish between "self" and foreign proteins. This "autoimmune" theory of aging is based on clinical rather than on experimental evidence.

- **Glycation theory:**

"Glycation" theory suggests that glucose acts as a mediator of aging. Glycation, in which simple sugars (e.g., glucose) bind to molecules such as proteins and lipids, has a profound cumulative effect during life. Such effects may be similar to the elevated glucose levels and shorter life spans observed in diabetic humans.

- **Oxidative damage theory:**

Reactions that take place within cells can result in the oxidation of proteins and other cellular molecules. Oxidation entails the loss of electrons from these molecules, causing them to become unstable and highly reactive and leading to their eventual reaction with and damage of cell components such as membranes. Such reactive molecules are known as free radicals-any atom or molecule that has a single unpaired electron in an outer shell.

Oxidative damage (oxidative stress) accumulates with age, and this has given rise to the free radical theory of aging, which is concerned in particular with molecules known as reactive oxygen species (ROS). This theory was first proposed in the 1950s by American gerontologist Denham Harman and was supported in part by evidence

that antioxidant proteins, which neutralize free radicals, are more abundant in aging cells, indicating a response to oxidative stress.

The initial free radical theory of aging was later extended to include ROS derived from cellular organelles known as mitochondria, which are the primary sites of energy production in most eukaryotic organisms (eukaryotic cells are cells with clearly defined nuclei). The mitochondrial theory of aging was based on the idea that there exists within mitochondria a vicious oxidation cycle, in which the mutation of mitochondrial DNA impairs the function of proteins in the organelle's respiration machinery, thereby enhancing the production of DNA-damaging oxygen radicals. This in turn results in the accumulation of mutations in mitochondrial DNA and a bioenergetic impairment, characterized by the failure of mitochondria to produce sufficient energy for cells to carry out their daily activities, which leads to tissue dysfunction and degeneration.

A similar mitochondrial theory of aging proposes a mechanism in which electrons leaking from the electron transport chain (ETC), the central component of the organelle's respiration machinery, produce ROS and then damage ETC proteins and mitochondrial DNA, leading to further increases in intracellular ROS levels and a decline in mitochondrial function.

Another consideration is the molecular inflammatory theory of aging, whereby the activation of redox-(oxidation-reduction-) sensitive transcription factors (molecules that control gene activity) by age-related oxidative stress causes increased expression of proinflammatory genes, leading to inflammation in various tissues. This inflammatory cascade is exaggerated during aging and has been linked to many age-associated pathologies, including cancer, cardiovascular disease, arthritis, and several

neurodegenerative diseases. Chronic inflammation, whether due to diet, infection, stress, or other factors, can potentially accelerate the aging process.

Mammals under calorie restriction produce fewer ROS and age slower. Such effects of calorie restriction have been attributed to its ability to lower the steady state of oxidative stress, slow the accumulation of age-associated oxidative damage, and increase metabolic efficiency.

A common phenomenon in all of the aforementioned theories is that ROS serve as a contributing factor to many age-associated diseases.

- **Psycho-Sociological theory:**

In addition to theories of aging based on molecules and cells, there also exists a "psycho-sociological" theory of aging. As people grow older, their behaviour changes, their social interactions change, and the activities in which they engage change. The psycho-sociological theory of aging can be divided roughly into four component theories: disengagement, activity, life-course, and continuity theories. Disengagement theory is based on hampered relationships between a person and other members of society. Activity theory emphasizes the importance of ongoing social activity and suggests that a person's self-concept(self-perspective) is related to the roles held by that person. Life-course theory is based on the developmental stages proposed by German-born American psychoanalyst Erik H.Erikson. According to Erikson's stages, maturity is a process that continues into old age, and in each stage the individual encounters new psychosocial demands. Continuity theory states that older adults try to preserve and maintain internal and external characteristics(e.g., values, personality, preferences, and behaviour patterns) throughout life, despite changes in their health or life circumstances.

NATIONAL PROGRAMME FOR HEALTHCARE OF ELDERLY (NPHCE):

Introduction

Keeping in view the recommendations made in the "National Policy on Older Persons" as well as the State's obligation under the "Maintenance & Welfare of Parents & Senior Citizens Act 2007", the Ministry of Health & Family Welfare launched the "National Programme for the Health Care of Elderly" (NPHCE) during the year 2010, in the 11th Plan period, to address various health related problems of elderly people.[12]

Main Strategies

Following strategies will be adopted to achieve the above mentioned objectives:

- Preventive and promotive care: The preventive and promotive health care services such as regular physical exercise, balanced diet, vegetarianism, stress management, avoidance of smoking or tobacco products and prevention of fall, etc. are provided by expanding access to health practices through domiciliary visits by trained health workers. They will impart health education to old persons as well as their family members on care of older persons. Besides, regular monitoring and assessment of old persons are carried out for any infirmity or illness by organizing weekly clinic at PHCs.

- Management of Illness: Dedicated outdoor and indoor patients services will be developed at PHCs, CHCs, District Hospitals and Regional Geriatric Centres for management of chronic and disabling diseases by providing central assistance to the State Governments.

- Health Man Power Development for Geriatric Services : To overcome the shortage of trained medical and para-medical professionals in geriatric medicine, in service training will be imparted to the health manpower using standard training modules prepared with the help of medical colleges and regional institutions. The post graduate courses in geriatric medicine will be introduced in Regional Geriatric Centres for which additional teaching and supportive faculties are provided to these institutions.

- Medical Rehabilitation & Therapeutic Intervention: By arranging therapeutic modalities like therapeutic exercises, training in activities of daily life (ADL) & treatment of pain and inflammation through physiotherapy unit at CHC, district hospital and Regional Geriatric Centre levels for which necessary infrastructure, medicine and equipment are provided to these identified units.

- Information, Education & Communication (IEC): Health education programmes using mass media, folk media and other communication channels are being promoted to reach out to the target community for promoting the concept of healthy ageing, importance of physical exercise, healthy habits, and reduction of stress. Camps for regular medical check-up are being organised at various levels where IEC activities are also specifically promoted.

Global Recommendations on Physical Activity for Health:

Recommendations:

In older adults of the 65 years and above age group, physical activity includes leisure time physical activity, transportation (e.g. walking or cycling), occupational (if the individual is still engaged in work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.[13]

The recommendations in order to improve cardiorespiratory and muscular fitness, bone and functional health, reduce the risk of NCDs, depression and cognitive decline are:

1. Older adults should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.

2. Aerobic activity should be performed in bouts of at least 10 minutes duration.

3. For additional health benefits, older adults should increase their moderate intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate-and vigorous-intensity activity.

4. Older adults, with poor mobility, should perform physical activity to enhance balance and prevent falls on 3 or more days per week.

5. Muscle-strengthening activities, involving major muscle groups, should be done on 2 or more days a week.

6. When older adults cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions allow[11].

Yoga Therapy:

Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body. It is an art and science of healthy living.

The word 'Yoga' is derived from the Sanskrit root 'Yuj', meaning 'to join' or 'to yoke' or 'to unite'. As per Yogic scriptures the practice of Yoga leads to the union of individual consciousness with that of the Universal Consciousness, indicating a perfect harmony between the mind and body, Man & Nature.[14]

Yoga therapy may be defined as the application of Yogic principles to a particular person with the objective of achieving a particular spiritual, psychological, or physiological goal. The means employed are comprised of intelligently conceived steps that include but are not limited to the components of Ashtânga Yoga, which includes the educational teachings of *yama, niyama, âsana, prânâyâma, pratyâhâra, dhâranâ, dhyâna*, and *samâdhi*. Also included are the application of meditation, textual study, spiritual or psychological counselling, chanting, imagery, prayer, and ritual to meet the needs of the individual. Yoga therapy respects individual differences in age, culture, religion, philosophy, occupation, and mental and physical health. The knowledgeable and competent *yogin* or *yoginî* applies Yoga Therapy according to the period, the place, and the practitioner's age, strength, and activities.

The application of Yoga therapy is from one or more of three perspectives:

1. The use of Yoga to gain a sense of power, i.e., to develop muscular power, the power to concentrate, the power to do difficult postures, the ability to work over and extended period of time, etc. This is called the application of *shakti-krama*.

2. The use of Yoga to heal specific problems, such as eliminating impurities in the organs (*doshas*) or energy centers (*cakras*) and channels (*nâdîs*) of the body. This is *chikitsâ-krama*.

- If sickness is present, it needs to be cured *(chikitsâ*).
- If sickness is not present, protection is necessary (*rakshana*).
- If sickness is not present and one has learned how to protect oneself, training is necessary (*shikshana*).

3. The use of Yoga to go beyond the physical to understand what is beyond the limited sense of self; to know one's true self as unchanging Witnessing Presence (*Purusha*) of all that is changing (*prakriti*). This is called the application of *âdhyâtmika-krama*.[15]

HISTORY OF YOGA

Yoga's history has many places of obscurity and uncertainty due to its oral transmission of sacred texts and the secretive nature of its teachings. The early writings on yoga were transcribed on fragile palm leaves that were easily damaged, destroyed or lost. The development of yoga can be traced back to over 5,000 years ago, but some researchers think that yoga may be up to 10,000 years old. Yoga's long rich history can be divided into four main periods of innovation, practice and development.

Pre-Classical Yoga

The beginnings of Yoga were developed by the Indus-Sarasvati civilization in Northern India over 5,000 years ago. The word yoga was first mentioned in the oldest sacred texts, the Rig Veda. The Vedas were a collection of texts containing songs, mantras and rituals to be used by Brahmans, the Vedic priests. Yoga was slowly refined and developed by the Brahmans and Rishis (mystic seers) who documented their practices and beliefs in the upanishads, a huge work containing over 200 scriptures. The most renowned of the Yogic scriptures is the Bhagavad-Gîtâ, composed around 500 B.C.E. The Upanishads took the idea of ritual sacrifice from the Vedas and internalized it, teaching the sacrifice of the ego through self-knowledge, action (karma yoga) and wisdom (jnana yoga).

Classical Yoga

In the pre-classical stage, yoga was a mishmash of various ideas, beliefs and techniques that often conflicted and contradicted each other. The Classical period is defined by Patanjali's Yoga-Sûtras, the first systematic presentation of yoga. Written in the second century, this text describes the path of RAJA YOGA, often called "classical yoga". Patanjali organized the practice of yoga into an "eight limbed path" containing the steps and stages towards obtaining Samadhi or enlightenment. Patanjali is often considered the father of yoga and his Yoga-Sûtras still strongly influence most styles of modern yoga.

Post-Classical Yoga

A few centuries after Patanjali, yoga masters created a system of practices designed to rejuvenate the body and prolong life. They rejected the teachings of the ancient Vedas and embraced the physical body as the means to achieve enlightenment. They

developed Tantra Yoga, with radical techniques to cleanse the body and mind to break the knots that bind us to our physical existence. This exploration of these physical-spiritual connections and body centered practices led to the creation of what we primarily think of yoga in the West: Hatha Yoga.

Modern Period

In the late 1800s and early 1900s, yoga masters began to travel to the West, attracting attention and followers. This began at the 1893 Parliament of Religions in Chicago, when Swami Vivekananda wowed the attendees with his lectures on yoga and the universality of the world's religions. In the 1920s and 1930s, Hatha Yoga was strongly promoted in India with the work of T. Krishnamacharya, Swami Sivananda and other yogis practicing Hatha Yoga. Krishnamacharya opened the first Hatha Yoga school in Mysore in 1924 and in 1936 Sivananda founded the Divine Life Society on the banks of the holy Ganges River. Krishnamacharya produced three students that would continue his legacy and increase the popularity of Hatha Yoga: B.K.S. Iyengar, T.K.V. Desikachar and PattabhiJois. Sivananda was a prolific author, writing over 200 books on yoga, and established nine ashrams and numerous yoga centers located around the world.

The importation of yoga to the West still continued at a trickle until Indra Devi opened her yoga studio in Hollywood in 1947. Since then, many more western and Indian teachers have become pioneers, popularizing hatha yoga and gaining millions of followers. Hatha Yoga now has many different schools or styles, all emphasizing the many different aspects of the practice.[16]

In recent times yoga is part and parcel of world culture because of initiation by our honourable prime minister Narendra Modi in 2015. The International Yoga Day has

been celebrated annually on 21 June since 2015, following its inception in the United Nations General Assembly in 2014. The Indian Prime Minister, Narendra Modi, in his UN address in 2014, had suggested the date of 21 June, as it is the longest day of the year in the Northern Hemisphere and has special significance in many parts of the world.

After the international declaration every year in June 21st the people all over the world that day as international yoga day in India it is celebrated with the 45 minutes yoga protocol all over the country impact of this celebration made as yoga as a universal language for mental health and because if this acceptance of yoga outside India and inside India became very high and thus yoga become very popular and the government of India also declared yoga as a sports, because of all these activities yoga also included in professional curriculum , the one of the compulsory subjects in many central universities and also diploma and post graduate certification course also offered in many universities

ASANAS

In Yoga, it is laid down that regular Asana practice promises to deliver the capability to overcome dualities in our life. So what is this Asana ? The Patanjali Yoga Sutra defines Asana as the posture that gives stability and comfort “sthiramsukhamasanam”. And this is possible through “prayathnashaithilya and ananthasamapatti which suggests practicing asanas, with minimum effort and focusing on contemplation of the infinite. Except for Hatha Yoga, all schools of Yoga uses Asanas are mainly intended to the advanced state of meditation. Hatha yoga uses Asanas as a technique to prepare the body to do an advanced state of Pranayama, and to balance the “Tridosha” to prevent all diseases. From amongst the multiple schools of yoga prevalent today, the Haṭha yoga stream is currently the most popular. As explained in the

"Shivayogadeepika" written by SadashivaBrahmendra, an important benefit of practicing Hatha Yoga is that it will eliminate all the morbidity from the body, so that diseases can be prevented. A healthy body is the fundamental requirement to attain spiritual realization. Therefore it follows that it is important to practice multiple Asanas to prepare the body to actualize its potential.

The Aim of Asanas

The PathanjaliYogasutra declares that regular practice of Yoga Asana will overcome the dualities at both levels: mental and physical. To realize the maximum impact of Yoga through the physical aspects of Asana the procedure should be done with minimum effort and to attain the mental steadiness infinite contemplation must be practiced with ease. One of the primary obstacles to Yoga is Vyadhi. When there is an imbalance in the homeostasis of the Thridoshas, it creates Vyadhi or disease. The stream of Hatha Yoga recommends multiple types of Asanas and Kumbhakas to purify the body and subtle energy channels in our body. So it follows that when we regularly practice Asanas our body develops immunity and resistance. This impact is being validated through research studies in this area.

The Number of Asanas

The Yogathathwopanishat defines the number of Asanas as equal to the number of species existing in this universe- "asanani ca tavantiyavantyojivajatayah ". The Rudrayamala Uttara Tantra puts it at 100 crores, (shatalakshasahasraniasananimahithale). But of course, so many Asanas cannot be practiced in one's normal lifespan. Therefore the significance of the Hatha Yogic

texts has captured a condensed repertoire of the main Asanas. The Hathapradeepika delineates on 84 Asanas as advised by Lord Shiva. The Thirumandiramwrittern by ThirumoolaNayanar mentions 126 important Asanas. Hatharathnavali also mentions the names of 84 Asanas, but describes in detail about 31 Asanas only.

The Ancient Texts as the source

Many Hathayogic texts have been found and these explain about the various methods of practice of Yogasanas. Hathapradeepika is the most often referenced text. The GherandaSamhitha and the Hatharathnavali provides more information about quite a number of Asanas and how to practice those Asanas. While the Hathapradeepika explains 15 Asanas the GherandaSamhitha describes 32 Asanas. The Hatharathnavaly dwells on 31 Asanas. Apart from these, there is Vasishtha Samhita, Yoga Yajnavalkya, Ahirbudhnya Samhita, etc. In Thantrik literature, the Rudrayamala Uttara Thantra contains information about multiple Asanas. Here, various methods of Asanas are explained in relation to secret tantric practices, besides which 54 Asanas linked to Hatha Yoga Tradition can be found. Surprisingly these are the Asanas that have no manuscript reference for them though currently in practice in the Yoga Asana scheme.

Asanas in Hatha Pradeepika.

Swasthikasana, Gomukhasana, Virasana, Kurmasana, Kukkutasana, Uttanakurmasana, Dhanurasana, Mathsyendrasana, Mayurasana, Pashcimottanasana, Shavasana, Siddhasana, Padmasana, Simhasana, Bhadrasana. Total of 15 Asanas.

Asanas in Gheranda Samhita.

Siddhasana, Padmasana, Bhadrasana, Mukthasana, Vajrasana, Swasthikasana, Simhasana, Gomukhasana, Virasana, Dhanurasana, Mrthasana, Gupthasana, Mathsyasana, Mathsyendrasana, Gorakshasana, Pashcimotthanasana, Uthkatasana, Samkatasana, Mayurasana, Kukkutasana, Kurmasana, Utthanakurmasana,Utthanamandukasana, Vrkshasana, Mandukasana,Garudasana, Vrshasana, Shalabhasana, Makarasana, Ushtrasana, Bhujangasana, Yogasana. Total of 32 Asanas.

Asanas in Ahirbudhnya Samhita.

Chakrasana, Padmasana, Kurmasana, Mayurasana, Kukkutasana, Virasana, Swasthikasana, Bhadrasana, Simhasana, Mukthasana, Gomukhasana. Total of 11 Asanas.

Asanas in Rudra Yamala Uttara Tantra.

Mundasana, Padmasana, Baddhapadmasana, Svasthikasana, Karrmukasana, Kukkutasana, Khagasana, Lolasana, Utthamangasana, Parvathasana, Yonyasana, Baddhayonyasana, Mahabhekasana, Khecharasana, Pranasana, Apanasana, Samanasana, Grandhibhedasana, Sarvangasana(Shoulder Stand Posture), Mayurasana,Jnanasana, Garudasana, Kokilasana, Anandamandirasana,Khanjanasana, Pavanasana, Sarpasana, Skandhasana, Kurmasana, Kumbhirasana, Mathsyasana, Makarasana, Kuncharasana, Vyaghrasana, Bhallukasana, Kamasana, Varthulasana, Mokshasana, Malasana, Divyasana, Adhordayasana, chandrasana, Hamsasana,

Suryasana, Yogasana, Gadasana, Lakshyasana, kullyāsana, Brahmanasana, Kshathriyasana, Vaishyasana, Jathyasana, Pashavasana. Total of 54 asanas.

Asanas in Yoga Yajna valkya.

Swasthikasana (Two variations), Gomukhasana, Padmasana, Virasana, Simhasana, Bhadrasana, Mukthasana (Two variations), Mayurasana. Total 8 types of Asanas.

Asanas in Vasishtha Samhita.

Swasthikasana, Gomukhasana, Padmasana, Virasana, Simhasana, Mayurasana, Kukkutasana, Kurmasana, Bhadrasana, Mukthasana. Total of 10 Asanas.

Asanas in Hatharathnavali.

Siddhasana, Bhadrasana, Simhasana, Padmasana, Mayurasana (Dandamayurasana), Parshwamayurasana, Pindamayurasana, Ekapadamayurasana, Bhairavasana, Kamadahanasana, Panipathrasana, Dhanurasana, Swasthikasana, Gomukhasana, Virasana, Mandukasana, Markatasana, Mathsyendrasana two variations, Niralambanasana, Saurasana, Ekapadasana, Phanindrasana, Pashchimatanasana, ShayithaPascimathanakam, Vichithrakaraninamasana, Dhoonapithasana (vidhoonanam), Padapidanasana, Kukkutasana, Utthanakurmasana, Vrshchikasana, Shavasana. Total of 31 Asanas.

Asanas in ThrishikhiBrahmanopanishat.

Swathikasana, Gomukhasana, Virasana, Yogasana, Padmasana, Kukkutasana, Utthanakurmasana, Dhanurasana, Simhasana, Bhadrasana, Mukthasana, Mayurasana, Mathsyasana, Siddhasana, Pashcimathanasana, Sukhasana.

Total of 16 Asanas.

Asanas are advised to the elderly individuals in a limited way as they aren't able to perform very complicated ones and also for longer duration. Simple and easy asanas are advised which are also beneficial mentally, spiritually and physically.

Asanas are accompanied by the pranayama and dhyana for upliftment of the quality of life of the individuals.

PRANAYAMA:

Pranayama is generally defined as breath control. The word pranayama is comprised of two roots: prana plus ayama. Prana means 'vital energy' or 'life force'. It is the force which exists in all things, whether animate or inanimate. Although closely related to the air we breathe, it is more subtle than air or oxygen. Pranayama utilises breathing to influence the flow of prana in the nadis or energy channels of the pranamaya kosha or energy body. Ayama is defined as 'extension' or 'expansion'. Thus, the word pranayama means 'extension or expansion of the dimension of prana'. The techniques of pranayama provide the method whereby the life force can be activated and regulated in order to go beyond one's normal boundaries or limitations and attain a higher state of vibratory energy[17].

Four aspects of pranayama

In the pranayama practices there are four important aspects of breathing which are utilized. These are:

1. Pooraka or inhalation

2. Rechaka or exhalation

3. Antarkunbhaka or internal breath retention

4. Bahir kumbhaka or external breath retention.

Why do we need Pranayama?

According to an estimate our lungs take in 180 to 200 cubic inches. When we inhale we take in 30 cubic inches air and exhale the same amount. Around 150 cubic inches remains in the lungs all the time. If we take a deep long breathe we can inhale and exhale upto 100 cubic inches of air. With pranayama we can make major part of the air present in the lungs active in the breathing cycle. If the residual air in the lungs is purified, the food is digested properly, the body organs become strong, and the body as a whole is cleansed.

Short, incomplete and shallow respiration is generally fast and the person with fast rate of breathing does not live long. The longer(deeper the breath) the breathing cycle and slower the rate o breathing, the longer is the life[18].

The History of Pranayama:

- Brihadaranyaka Upanishad (Circa 700 BCE)

  While references to the term 'prana' can be found as early as 3,000 BCE in the Chandogya Upanishad, references to pranayama as a breathing practice do not occur until much later in yogic literature (approximately 700 BCE).

  One of the earliest recorded references to pranayama as a breath related practice can be found in hymn 1.5.23 of the Brihadaranyaka Upanishad. Clearly linking breathing practices to the regulation of vital energy and life-force, the Upanishad states:

  "One should indeed breathe in (arise), but one should also breathe out (without setting) while saying, "Let not the misery that is dying reach me." * When one would practice that (breathing), one should rather desire to thoroughly realize that (immortality). It is rather through that (realization) that he wins a union with this divinity (breath), that is a sharing of worlds."

- The Bhagavad Gita (Circa Fifth Century to Second Century BCE)

  References to pranayama practices can also be found in the Bhagavad Gita, Chapter 4, verse 29. The text highlights the use of conscious inhaling, exhaling and breath retention to effect trancelike states. The text also suggests that the regular practice of pranayama can be used to enact greater control over the senses by "curtailing the eating process."

- The Maitrayaniya Upanishad (Circa 4th Century BCE)

  The Maitrayaniya Upanishad is an important text in the history of pranayama because it contains one of the earliest references to pranayama as a component in a larger, multifaceted system. Most likely composed centuries before the Yoga Sutras of Patanjali, this text enumerates yoga as a six-step process of breath control (pranayama), sensory withdrawal (pratyahara), concentration (dharana), meditation (dhyana), reasoning (tarka) and union (samadhi).

  Specific references to pranayama practices can be found in chapter six, verse 21. The text states that deliverance can be accomplished by using a combination of breath retention practices and concentration on the sacred syllable Om in order to redirect prana into the body's central energy channel (Sushumna).

- Patanjali's Yoga Sutras (Circa 100 to 400 CE)

  Most scholars agree that the Yoga Sutras of Patanjali are a compilation of texts from earlier yoga traditions. By the time of Patanjali, yoga as a system had continued to adapt and grow. The six-limbed system mentioned in the Maitrayaniya Upanishad had grown into eight limbed approach that included asana (physical postures) yama and niyama (social and ethical precepts) pranayama as well as four additional stages of meditative absorption (pratyahara, dharana, dhyana and samadhi).

  References to pranayama can be found in verses 2.29 – thru 2.53 of the Sutras. While Patanjali does not go deeply into the nature of prana in these sections, he does detail four separate aspects of the breath: inhale, exhale and retention.

In addition, Patanajali also makes reference to a fourth pranayama in sutra 2.51 that he claims surpasses or goes beyond the other three.

In addition, Patanjali notes a number of specific benefits of pranayama practice. These benefits include mental fitness and the ability to concentrate – a prerequisite to deeper states of yoga practice. Additionally, Patanjali states in verse 2:52 that regular pranayama practice could lessen or dissolve the veil that covers our "inner illumination."

- The Hatha Yoga Pradipika (Circa 1500 CE)

  Though traditionalists trace the roots of Hatha Yoga practice to the God Shiva, many scholars associate the founding of the Hatha yoga movement with the Maha Siddha Goraksha Nath. Widely associated with being the founding father of the practice, Gorakshanath is purported to have lived sometime between the 10th and 15th century CE. Numerous texts are accredited to him and his disciples.

  One of the most important texts of the medieval era is the Hatha Yoga Pradipika, which was written by Goraksha Nath's pupil Swami Svatmarama. Drawing from earlier systems, the text emphasizes the attainment of good heath and spiritual realization through a combination of physical postures, pranayama practices and meditative contemplations.

  The Pradipika differs from some of the early texts in the history of pranayama, because it more fully details actual instructions for practice. These instructions include specific references to alternate nostril-breathing patterns, details on how to retain the breath, guidelines on auspicious times for practice and an overview of the various signs of progress in pranayama.

Further references to pranayama techniques can be found in a number of additional medieval manuscripts. The most important of these texts include the Gheranda Samhita (late seventeenth century) and Shiva Samhita (seventeenth or eighteenth century CE)[19].

Pranayama is the regulation of breath superficially and regulation of nadis when assessed in a subtle manner. As it is easy to understand and is not a dynamic form of yoga it can be easily performed with simple relaxative postures. It also benefits one's cognitive process and in purification of the nadis which is usually obstructed or stagnated during the old age.

DHYANA:

There are many forms of meditation, ranging in complexity from strict, regulated practices to general recommendations. If practiced regularly, meditation is thought to help develop habitual, unconscious micro-behaviours that can potentially produce widespread positive effects on physical and psychological functioning. Meditation even for 15 minutes twice a day has been shown to bring beneficial results[20].

How does meditation work?

Parasympathetic response Most theories are based on the assumption that meditation is a sophisticated form of relaxation involving a concept called the parasympathetic response. Psychological stress is associated with activation of the sympathetic component of the autonomic nervous system which, in its extreme, causes the 'fight or flight response'. Meditation and any form of rest or relaxation acts to reduce sympathetic activation by reducing the release of catecholamines and other stress

hormones such as cortisol, and promoting increased parasympathetic activity which in turn slows the heart rate and improves the flow of blood to the viscera and away from the periphery.

Other neurophysiological effects:

Other proponents claim that meditation involves unique neurophysiological effects; however, this remains to be proven. Research at the MRP suggests the limbic system may be involved in Sahaja yoga meditation (SYM) since significant effects involving mood state have been consistently observed.

'Thoughtless awareness':

If one closely examines the authentic tradition of meditation it is apparent that meditation is a discrete and well defined experience of a state called 'thoughtless awareness'. This is a state in which the excessive and stress producing activity of the mind is neutralized without reducing alertness and effectiveness. Authentic meditation enables one to focus on the 'present moment' rather than dwell on the unchangeable past or undetermined future. It is this state of equipoise that is said to be therapeutic both psychologically and physically and which fundamentally distinguishes meditation from simple relaxation, physical rest or sleep[21].

Types of meditation:

GENERAL TYPES OF MEDITATION:

Scientists usually classify meditation based on the way they focus attention, into two categories: Focused Attention and Open Monitoring. I'd like to propose a third: Effortless Presence.

Focused attention meditation

Focusing the attention on a single object during the whole meditation session. This object may be the breath, a mantra, visualization, part of the body, external object, etc. As the practitioner advances, his ability to keep the flow of attention in the chosen object gets stronger, and distractions become less common and short-lived. Both the depth and steadiness of his attention are developed.

Examples of these are: Samatha (Buddhist meditation), some forms of Zazen, Loving Kindness Meditation, Chakra Meditation, Kundalini Meditation, Sound Meditation, Mantra Meditation, Pranayama, some forms of Qigong, and many others.

Open monitoring meditation

Instead of focusing the attention on any one object, we keep it open, monitoring all aspects of our experience, without judgment or attachment. All perceptions, be them internal (thoughts, feelings, memory, etc.) or external (sound, smell, etc.), are recognized and seen for what they are. It is the process of non-reactive monitoring of

the content of experience from moment to moment, without going into them. Examples are: Mindfulness meditation, Vipassana, as well as some types of Taoist Meditation.

Effortless Presence

It's the state where the attention is not focused on anything in particular, but reposes on itself – quiet, empty, steady, and introverted. We can also call it "Choiceless Awareness" or "Pure Being". Most of the meditation quotes you find speak of this state.

This is actually the true purpose behind all kinds of meditation, and not a meditation type in itself. All traditional techniques of meditation recognize that the object of focus, and even the process of monitoring, is just a means to train the mind, so that effortless inner silence and deeper states of consciousness can be discovered. Eventually, both the object of focus and the process itself is left behind, and there is only left the true self of the practitioner, as "pure presence".

In some techniques, this is the only focus, from the beginning. Examples are: the Self-Enquiry ("I am" meditation) of Ramana Maharishi; Dzogchen; Mahamudra; some forms of Taoist Meditation; and some advanced forms of Raja Yoga. In my point of view, this type of meditation always requires previous training to be effective, even though this is sometimes not expressly said (only implied).

1) BUDDHIST MEDITATION TECHNIQUES

Zen Meditation (Zazen)

- Origin & Meaning

Zazen (坐禅) means “seated Zen”, or “seated meditation”, in Japanese. It has its roots in the Chinese Zen Buddhism (Ch’an) tradition, tracing back to Indian monk Bodhidharma (6th century CE). In the West, its most popular forms comes from Dogen Zenji (1200~1253), the founder of Soto Zen movement in Japan. Similar modalities are practiced in the Rinzai school of Zen, in Japan and Korea.

- How to do it

It is generally practiced seated on the floor over a mat and cushion, with crossed legs. Traditionally it was done in the so-called lotus or half-lotus position, but this is hardly necessary.

The most important aspect, is keeping the back completely straight, from the pelvis to the neck. Mouth is kept close and eyes are kept lowered, with your gaze resting on the ground about two or three feet in front of you.

As to the mind aspect of it, it’s usually practiced in two ways:

- Focusing on breath — focus all your attention on the movement of the breath going in and out through the nose. This may be aided by counting the breath in

your mind. Each time you inhale you count one number, starting with 10, and then moving backward to 9, 8, 7, etc. When you arrive in 1, you resume from 10 again. If you get distracted and lose your count, gently bring back the attention to 10 and resume from there.

- Shikantaza ("just sitting") — in this form the practitioner does not use any specific object of meditation; rather, practitioners remain as much as possible in the present moment, aware of and observing what passes through their minds and around them, without dwelling on anything in particular. It's a type of Effortless Presence meditation.

Vipassana Meditation

- Origin & Meaning

"Vipassana" is a Pali word thatmeans "insight" or "clear seeing". It is a traditional Buddhist practice, dating back to 6th century BC. Vipassana-meditation, as taught in the last few decades, comes from the Theravada Buddhist tradition, and was popularized by S. N. Goenka and the Vipassana movement.

Due to the popularity of Vipassanā-meditation, the "mindfulness of breathing" has gained further popularity in the West as "mindfulness".

- How to do it

There is some conflicting information on how to practice Vipassana. In general, however, most teachers emphasize starting with mindfulness of breath in the first stages, to stabilize the mind and achieve "access concentration." This is more like focused attention meditation. Then the practice moves on to developing "clear

insight" on the bodily sensations and mental phenomena, observing them moment by moment and not clinging to any. Here goes an introduction, aimed for beginners. To know more I'd suggest following up the links provided or learning from a teacher (perhaps in a Vipassana retreat).

Ideally, one is to sit on a cushion on the floor, cross-legged, with your spine erect; alternatively, a chair may be used, but the back should not be supported.

The first aspect is to develop concentration, through samatha practice. This is typically done through breathing awareness.

Focus all your attention, from moment to moment, on the movement of your breath. Notice the subtle sensations of the movement of the abdomen rising and falling. Alternatively, one can focus on the sensation of the air passing through the nostrils and touching the upper lips skin – though this requires a bit more practice, and is more advanced.

As you focus on the breath, you will notice that other perceptions and sensations continue to appear: sounds, feelings in the body, emotions, etc. Simply notice these phenomena as they emerge in the field of awareness, and then return to the sensation of breathing. The attention is kept in the object of concentration (the breathing), while these other thoughts or sensations are there simply as "background noise".

The object that is the focus of the practice (for instance, the movement of the abdomen) is called the “primary object”. And a “secondary object” is anything else that arises in your field of perception – either through your five senses (sound, smell, itchiness in the body, etc.) or through the mind (thought, memory, feeling, etc.). If a secondary object hooks your attention and pulls it away, or if it causes desire or aversion to appear, you should focus on the secondary object for a moment or two, labeling it with a mental note, like “thinking”, “memory”, “hearing”, “desiring”. This practice is often called “noting”.

A mental note identifies an object in general but not in detail. When you’re aware of a sound, for example, label it “hearing” instead of “motorcycle,” “voices” or “barking dog.” If an unpleasant sensation arises, note “pain” or “feeling” instead of “knee pain” or “my back pain.” Then return your attention to the primary meditation object. When aware of a fragrance, say the mental note “smelling” for a moment or two. You don’t have to identify the scent.

When one has thus gained “access concentration”, the attention is then turned to the object of practice, which is normally thought or bodily sensations. One observes the objects of awareness without attachment, letting thoughts and sensations arise and pass away of their own accord. Mental labeling (explained above) is often use as a way to prevent you from being carried away by thoughts, and keep you in more objectively noticing them.

As a result one develops the clear seeing that the observed phenomena is pervaded by the three "marks of existence": impermanence (annica), insatisfactoriness (dukkha) and emptiness of self (annata). As a result, equanimity, peace and inner freedom is developed in relation to these inputs.

Mindfulness Meditation

- Origin & Meaning

Mindfulness Meditation is an adaptation from traditional Buddhist meditation practices, especially Vipassana, but also having strong influence from other lineages (such as the Vietnamese Zen Buddhism from Thich Nhat Hanh). "Mindfulness" is the common western translation for the Buddhist term sati. Anapanasati, "mindfulness of breathing", is part of the Buddhist practice of Vipassana or insight meditation, and other Buddhist meditational practices, such as zazen (source: Wikipedia).

One of the main influencers for Mindfulness in the West is John Kabat-Zinn. His Mindfulness-Based Stress Reduction program (MBSR) – which he developed in 1979 at the University of Massachusetts Medical School – has been used in several hospitals and health clinic on the past decades.

- How to do it

Mindfulness meditation is the practice of intentionally focusing on the present moment, accepting and non-judgmentally paying attention to the sensations, thoughts, and emotions that arise.

For the “formal practice” time, sit on a cushion on the floor, or on a chair, with straight and unsupported back. Pay close attention to the movement of your breath. When you breath in, be aware that you are breathing in, and how it feels. When you breath out, be aware you are breathing out. Do like this for the length of your meditation practice, constantly redirecting the attention to the breath. Or you can move on to be paying attention to the sensations, thoughts and feelings that arise.

The effort is to not intentionally add anything to our present moment experience, but to be aware of what is going on, without losing ourselves in anything that arises.

Your mind will get distracted into going along with sounds, sensations, and thoughts. Whenever that happens, gently recognize that you have been distracted, and bring the attention back to the breathing, or to the objective noticing of that thought or sensation. There is a big different between being inside the thought/sensation, and simply being aware of it’s presence.

Learn to enjoy your practice. Once you are done, appreciate how different the body and mind feel.

There is also the practice of mindfulness during our daily activities: while eating, walking, and talking. For “daily life” meditation, the practice is to pay attention to what is going on in the present moment, to be aware of what is happening – and not

living in “automatic mode”. If you are speaking, that means paying attention to the words you speak, how you speak them, and to listen with presence and attention. If you are walking, that means being more aware of your body movements, your feet touching the ground, the sounds you are hearing, etc.

Your effort in seated practice supports your daily life practice, and vice-versa. They are both equally important.

Loving Kindness Meditation (Metta Meditation)

- Origin & Meaning

Metta is a Pali word that means kindness, benevolence, and good will. This practice comes from the Buddhist traditions, especially the Theravada and Tibetan lineages. “Compassion meditation” is a contemporary scientific field that demonstrates the efficacy of metta and related meditative practices.

Demonstrated benefits include: boosting one’s ability to empathize with others; development of positive emotions through compassion, including a more loving attitude towards oneself; increased self-acceptance; greater feeling of competence about one’s life; and increased feeling of purpose in life (read more in our other post).

- How to do it

One sits down in a meditation position, with closed eyes, and generates in his mind and heart feelings of kindness and benevolence. Start by developing loving-kindness towards yourself, then progressively towards others and all beings. Usually this progression is advised:

- oneself
- a good friend
- a "neutral" person
- a difficult person
- all four of the above equally
- and then gradually the entire universe

The feeling to be developed is that of wishing happiness and well-being for all. This practice may be aided by reciting specific words or sentences that evoke the "boundless warm-hearted feeling", visualizing the suffering of others and sending love; or by imagining the state of another being, and wishing him happiness and peace.

2)HINDU MEDITATION TECHNIQUES (Vedic & Yogic)

Mantra Meditation (OM Meditation)

- Origin & Meaning

A mantra is a syllable or word, usually without any particular meaning, that is repeated for the purpose of focusing your mind. It is not an affirmation used to convince yourself of something.

Some meditation teachers insist that both the choice of word, and its correct pronunciation, is very important, due to the "vibration" associated to the sound and meaning, and that for this reason an initiation into it is essential. Others say that the

mantra itself is only a tool to focus the mind, and the chosen word is completely irrelevant.

Mantras are used in Hindu traditions, Buddhist traditions (especially Tibetan and "Pure Land" Buddhism), as well as in Jainism, Sikhism and Daoism (Taoism). Some people call mantra meditation "om meditation", but that is just one of the mantras that can be used. A more devotion oriented practice of mantras is called japa, and consists of repeating sacred sounds (name of God) with love.

- How to do it

As most type of meditations, it is usually practiced sitting with spine erect, and eyes closed. The practitioner then repeats the mantra in his mind, silently, over and over again during the whole session.

Sometimes this practice is coupled with being aware of the breathing or coordinating with it. In other exercises, the mantra is actually whispered very lightly and softly, as an aid to concentration.

As you repeat the mantra, it creates a mental vibration that allows the mind to experience deeper levels of awareness. As you meditate, the mantra becomes increasingly abstract and indistinct, until you're finally led into the field of pure consciousness from which the vibration arose.

Repetition of the mantra helps you disconnect from the thoughts filling your mind so that perhaps you may slip into the gap between thoughts. The mantra is a tool to support your meditation practice. Mantras can be viewed as ancient power words with

subtle intentions that help us connect to spirit, the source of everything in the universe.

OM is a well-known example of a mantra. But there are thousands of others. Here are some of the most well-known mantras from the Hindu & Buddhist traditions:

- Om
- so-ham
- om namahshivaya
- om manipadme hum
- rama
- yam
- ham

You may practice for a certain period of time, or for a set number of "repetitions" – traditionally 108 or 1008. In the latter case, beads are typically used for keeping count.

As the practice deepens, you may find that the mantra continues "by itself" like the humming of the mind. Or the mantra may even disappear, and you are left in a state of deep inner peace.

Transcendental Meditation (TM)

- Origin & Meaning

Transcendental Meditation is a specific form of Mantra Meditation introduced by Maharishi Mahesh Yogi in 1955 in India and the West. In the late 1960s and early

1970s, the Maharishi achieved fame as the guru to the Beatles, The Beach Boys and other celebrities.

It is a widely practiced form of meditation, with over 5 million practitioners worldwide, and there is a lot of scientific research, many sponsored by the organization, demonstrating the benefits of the practice. There are over 600 scientific papers, many of them peer-reviewed, and I have used part of their research when composing my benefits of meditation page. However, there are also critics of the Maharishi and his organization, and some accusation of cultish behavior and doubtful research practices.

- How to do it

Transcendental meditation is not taught freely. The only way of learning it is to pay to learn from one of their licensed instructors. The support given seems to be good, though.

In general, however, it is known that TM involves the use of a mantra and is practiced for 15–20 minutes twice per day while sitting with one's eyes closed. The mantra is not unique, and is given to the practitioner based on his gender and age. They are also not "meaningless sounds" – rather, they are Tantric names of Hindu deities. This probably is irrelevant for most people.

<u>Yogic Meditations</u>

- Origin & Meaning

There is not one type of meditation which is “Yogic Meditation”, so here it is meant the several meditation types taught in the yoga tradition. Yoga means “union”. Tradition goes as far as 1700 B.C, and has as its highest goal spiritual purification and Self-Knowledge. Classical Yoga divides the practice into rules of conduct (yamas and niyamas), physical postures (asanas), breathing exercises (pranayama), and contemplative practices of meditation (pratyahara, dharana, dhyana, samadhi).

The Yoga tradition is the oldest meditation tradition on earth, and also the one with the widest variety of practices.

- How to do it

Here are some types of meditation practiced in Yoga. The most common and universal Yoga meditation one is the “third eye meditation”. Other popular ones involve concentrating on a chakra, repeating a mantra, visualization of light, or gazing meditations.

Third Eye Meditation — focusing the attention on the “spot between the eyebrows” (called by some “the third eye” or “ajna chakra”). The attention is constantly redirected to this point, as a means to silence the mind. By time the “silent gaps” between thoughts get wider and deeper. Sometimes this is accompanied by physically “looking”, with eyes closed, towards that spot.

Chakra Meditation — the practitioner focuses on one of the seven chakras of the body (“centers of energy”), typically doing some visualizations and chanting a specific mantra for each chakra (lam, vam, ram, yam, ham, om). Most commonly it is done on the heart chackra, third eye, and crown chackra.

Gazing Meditation (Trataka) — fixing the gaze on an external object, typically a candle, image or a symbol (yantras). It is done with eyes open, and then with eyes closed, to train both the concentration and visualization powers of the mind. After closing the eyes, you should still keep the image of the object in your "mind's eye". This meditation is so important and powerful, that I wrote this post on the subject.

Kundalini Meditation — this is a very complex system of practice. The goal is the awakening of the "kundalini energy" which lies dormant on the base of the spine, the development of several psychic centers in the body, and, finally, enlightenment. There are several dangers associated with this practice, and it should not be attempted without the guidance of a qualified yogi.

Kriya Yoga — is a set of energization, breathing, and meditation exercises taught by Paramahamsa Yogananda. This is more suited for those who have a devotional temperament, and are seeking the spiritual aspects of meditation. To learn it, you can apply to receive the Self-Realization lessons, free of charge.

Sound Meditation (Nada Yoga) — focusing on sound. Starts with meditation on "external sounds", such as calming ambient music (like Native American flute music), whereby the student focuses all his attention on just hearing, as a help to quieten and collect the mind. By time the practice evolves to hearing the "internal sounds" of the body and mind. The ultimate goal is to hear the "Ultimate Sound" (para nada), which is a sound without vibration, and that manifests as "OM".

Tantra — unlike the popular view in the West, most Tantra practices have nothing to do with ritualized sex (this was practiced by a minority of lineages. Tantra is a very rich tradition, with dozens of different contemplative practices. The text Vijnanabhairava Tantra, for instance, lists 108 "meditations", most of them more

advanced (already requiring a certain degree of stillness and mind control). Here are some examples from that text:

- Merge the mind and the senses in the interior space in the spiritual heart.
- When one object is perceived, all other objects become empty. Concentrate on that emptiness.
- Concentrate on the space which occurs between two thoughts.
- Fix attention on the inside of the skull. Close eyes.
- Meditate on the occasion of any great delight.
- Meditate on the feeling of pain.
- Dwell on the reality which exists between pain and pleasure.
- Meditate on the void in one's body extending in all directions simultaneously.
- Concentrate on a bottomless well or as standing in a very high place.
- Listen to the Anahata(heart chakra) sound.
- Listen to the sound of a musical instrument as it dies away.
- Contemplate on the universe or one's own body as being filled with bliss.
- Concentrate intensely on the idea that the universe is completely void.
- Contemplate that the same consciousness exists in all bodies.

Self-Enquiry and "I Am" Meditation

- Origin & Meaning

Self-Enquiry is the English translation for the Sanskrit term atmavichara. It means to "investigate" our true nature, to find the answer to the "Who am I?" question, which culminates with the intimate knowledge of our true Self, our true being. We see references to this meditation in very old Indian texts; however, it was greatly

popularized and expanded upon by the 20th-century Indian sage Ramana Maharshi (1879~1950).

The modern non-duality movement (or neo-advaita), which is greatly inspired in his teachings – as well as those of Nisargadatta Maharaj(1897~1981) and Papaji – strongly uses this technique and variations. Many contemporary teachers to employ this technique, the most famous ones being Mooji, Adyashanti, and Eckhart Tolle.

- How to do it

This practice is very simple, but also very subtle. When explaining it, however, it may sound very abstract.

Your sense of "I" (or "ego") is the center of your universe. It is there, in some form or another, behind all your thoughts, emotions, memories, and perceptions. Yet we are not clear about what this "I" is – about who we truly are, in essence – and confuse it with our body, our mind, our roles, our labels. It's the biggest mystery in our lives.

With Self-Enquiry, the question "Who I am?" is asked within yourself. You must reject any verbal answers that may come, and use this question simply as a tool to fix your attention in the subjective feeling of "I" or "I am". Become one with it, go deep into it. This will then reveal your true "I", your real self as pure consciousness, beyond all limitation. It is not an intellectual pursuit, but a question to bring the attention to the core element of your perception and experience: the "I". This is not your personality, but a pure, subjective, feeling of existing – without any images or concepts attached to it.

Whenever thoughts/feelings arise, you ask yourself, “To whom does this arise?” or “Who is aware of _____ (anger, fear, pain, or whatever)?” The answer will be “It’s me!”. From then you ask “Who am I?”, to bring the attention back to the subjective feeling of self, of presence. It is pure existence, objectless and choice-less awareness.

Another way of explaining this practice is to just focus the mind on your feeling of being, the non-verbal “I am” that shines inside of you. Keep it pure, without association with anything you perceive.

With all other types of meditation, the “I” (yourself) is focusing on some object, internal or external, physical or mental. In self-enquiry, the “I” is focusing on itself, the subject. It is the attention turned towards its source.

There is no special position to practice.

3) CHINESE MEDITATION TECHNIQUES

Taoist Meditations

- Origin & Meaning

Daoism is a Chinese philosophy and religion, dating back to Lao Tzu (or Laozi). It emphasizes living in harmony with Nature, or Tao, and it’s main text is the Tao Te Ching, dating back to 6th century B.C. Later on some lineages of Taoism were also influenced by Buddhist meditation practices brought from India, especially on the 8th century C.E..

The chief characteristic of this type of meditation is the generation, transformation, and circulation of inner energy. The purpose is to quieten the body and mind, unify body and spirit, find inner peace, and harmonize with the Tao. Some styles of Taoist Meditation are specifically focused on improving health and giving longevity.

- How to do it

There are several different types of Taoist meditation, and they are sometimes classified in three: “insight”, “concentrative”, and “visualization”. Here is a brief overview:

- Emptiness meditation (Zuowang)— to sit quietly and empty oneself of all mental images (thoughts, feelings, and so on), to “forget about everything”, in order to experience inner quiet and emptiness. In this state, vital force and “spirit” is collected and replenished. This is similar to the Confucius discipline of “heart-mind fasting”, and it is regarded as “the natural way”. One simply allows all thoughts and sensations arise and fall by themselves, without engaging with or “following” any of them. If this is found to be too hard and “uninteresting”, the student is instructed with other types of meditation, such as visualization and Qigong
- Visualization (Cunxiang) — an esoteric practice of visualizing different aspects of the cosmos in relation to one’s own body and self.
- Breathing meditation (Zhuanqi) — to focus on the breath, or “unite mind and qi”. The instruction is “focus your vital breath until it is supremely soft”. Sometimes this is done by simply quietly observing the breath (similar to Mindfulness Meditation in Buddhism); in other traditions it is by following

certain patterns of exhalation and inhalation, so that one becomes directly aware of the "dynamisms of Heaven and Earth" through ascending and descending breath (a type of Qigong, similar to Pranayama in Yoga).

- Inner Vision (Neiguan) — visualizing inside one's body and mind, including the organs, "inner deities", qi (vital force) movements, and thought processes. It's a process of acquainting oneself with the wisdom of nature in your body. There are particular instructions for following this practice, and a good book or a teacher is required.
- Internal Alchemy (Neidan) — a complex and esoteric practice of self-transformation utilizing visualization, breathing exercises, movement and concentration. Some Qigong exercises are simplified forms of internal alchemy practices.

Most of these meditations are done seated cross-legged on the floor, with spine erect. The eyes are kept half-closed and fixed on the point of the nose.

Master Liu Sichuan emphasizes that, although not easy, ideally one should practice by "joining the breath and the mind together"; for those that find this too hard, he would recommend focusing on the lower abdomen(dantian).

Qigong (Chi kung)

- Origin & Meaning

Qigong (also spelled chi kung, or chi gung) is a Chinese word that means "life energy cultivation", and is a body-mind exercise for health, meditation, and martial arts training. It typically involves slow body movement, inner focus, and regulated breathing. Traditionally it was practiced and taught in secrecy in the Chinese Buddhist, Taoist and Confucianist traditions. In the 20th century, Qigong movement

has incorporated and popularized Daoist meditation, and "mainly employs concentrative exercises but also favors the circulation of energy in an inner-alchemical mode" (Kohn 2008a:120).

For a deep study on Qigong history, theory, and philosophy, I recommend The Root of Chinese Qigong.

Daoist practices may also employ Qigong, but since Qigong is also applied in other Chinese philosophies, I decided to treat it as a separate subject.

- How to do it

There are thousands of different Qigong exercises cataloged, involving over 80 different types of breathing. Some are specific to martial arts (to energize and strengthen the body); others are for health (to nourish body functions or cure diseases); and others for meditation and spiritual cultivation. Qigong can be practiced in a static position (seated or standing), or through a dynamic set of movements – which is what you typically see in YouTube videos and on DVDs. The exercises that are done as a meditation, however, are normally done sitting down, and without movement.

To understand more about Qigong and learn how to do it, I'd recommend getting a book or DVD set from Dr. Yang Jwing Ming, such as this one. But here goes an introductory overview of the practice of seated Qigong meditation:

- Sit in a comfortable position. Make sure your body is balanced and centered.
- Relax your whole body – muscles, nerves, and internal organs

- Regulate your breathing, making it deep, long, and soft.
- Calm your mind
- Place all your attention in the "lower dantien", which is the center of gravity of the body, two inches below the navel. This will help accumulate and root the qi(vital energy). Where your mind and intention is, there will be your qi. So, by focusing on the dantien, you are gathering energy in this natural reservoir.
- Feel the qi circulating freely through your body.

Other famous Qigong exercises are:

- Small Circulation (also called "microcosmic circulation")
- Embryonic Breathing
- Eight Pieces of Brocade (see this book excerpt & Wikipedia article)
- Muscle Tendon Changing (or "Yi Jin Jing", taught by Bodhidharma)

The first two are seated meditation, while the latter two are dynamic Qigong, integrating body stretches.

4) CHRISTIAN MEDITATION

In Eastern traditions (Hinduism, Buddhism, Jainism, Daoism) meditation is usually practiced with the purpose of transcending the mind and attaining enlightenment. On the other hand, in the Christian tradition the goal of contemplative practices is, one may say, moral purification and deeper understanding of the Bible; or a closer intimacy with God/Christ, for the more mystic stream of the tradition.

Here are some forms of Christian contemplative practice:

- contemplative prayer — which usually involves the silent repetition of sacred words or sentences, with focus and devotion
- contemplative reading — or simply "contemplation", which involves thinking deeply about the teachings and events in the Bible.
- "sitting with God" — a silent meditation, usually preceded by contemplation or reading, in which we focus all our mind, heart and soul on the presence of God.

5) SUFI MEDITATION TECHNIQUES

Sufism is the esoteric path within Islam, where the goal is to purify oneself and achieve mystical union with the Supreme (named Allah in this tradition). The practitioners of Sufism are called Sufis, and they follow a variety of spiritual practices, many of which were influenced by the tradition of Yoga in India.

Their main techniques include:

- Contemplation of God (muraqabah)
- Sufi Mantra meditation (zikr, jikr or dhikr)
- Heartbeat meditation
- Sufi breathing meditation (including Five Elements Breathing)
- Bond of Love meditation
- Gazing meditation
- Sufi walking meditation
- Sufi whirling

6) GUIDED MEDITATIONS

- Origin & Meaning

Guided Meditation is, in great part, a modern phenomenon. It is an easier way to start, and you will find guided meditations based on several of the above traditions.

The practice of meditation requires some dose of determination and will-power. In the past, people that were into meditation were more committed to it, and also had strong ideals fuelling their motivation. Their life was more simple, with less distractions.

We live in very different times now. Our life is busier. Distractions are everywhere, and meditation is often sought as a means to develop better health, enhance performance, or improve oneself.

For these reasons, guided meditations are very useful. They are both a great help in introducing you to the practice, help you experiment different techniques, or keep your attention more present in the meditation.

- How to do it

Guided meditation usually comes in the form of audio (file, podcast, CD), and sometimes audio and video. You will find that any guided meditation will fall in one of below categories (with some overlap, obviously).

- Traditional Meditations — With these types of audios, the voice of the teacher is simply there to "illustrate" or "guide" the way for your attention, in order to be in a meditative state; there is more silence than voice in it, and often no music. Examples are the ones offered by Thich Nhat Hanh and Tara Brach,

which are rooted in authentic Buddhist practices. The purpose is to develop and deepen the practice itself, with all the benefits that come with it.

- Guided Imagery — Makes use of the imagination and visualization powers of the brain, guiding you to imagine an object, entity, scenery or journey. The purpose is usually healing or relaxation.
- Relaxation & Body Scans — Helps you achieve a deep relaxation in your whole body. It's usually accompanied by soothing instrumental music or nature sounds. In Yoga these are called yoga nidra. The purpose is relaxation and calmness.
- Affirmations — Usually coupled with relaxation and guided imagery, the purpose of these meditations is to imprint a message in your mind.
- Binaural Beats — Binaural beats were originally discovered in 1839 by physicist Heinrich Wilhelm Dove. He discovered when signals of two different frequencies are presented separately, one to each ear, your brain detects the phase variation between the frequencies and tries to reconcile that difference. This is used to generate alpha waves (10 Hz), which is the brain wave associated with initial levels of meditation. There is scientific research into why and how binaural beats work.

Dhyana is one of the most accepted, easiest tool in yoga which is very much useful for the aged people because they do not need any energy , any training, and also it is easier for them to practice it at any time. So when compared to asana the 'dhyana' and 'pranayama' are most suitable for the senior citizen hence in the intervention these tools are added along with the asana to get more benefit and make the senior citizen healthy.

Yoga Protocol

A set of asana, pranayama and dhyana is selected and used as an intervention to improve quality of life.

Asana:

- Preparatory practices – Suksmavyayama (7 mins)- compulsory
- Tadasana (10 counts)
- Ardhapavanamuktasana (10 counts)
- Makarasana (20 counts)
- Bhujangasana(10 counts)
- Ardhamatsyendrasana/ Vakrasana (10 counts)
- Sukhasana (20 counts)
- Shavasana (with Deep Relaxation Technique)- 15 minutes - compulsory

Any five of the above asanas to be performed with suksmavyayama and shavasana.

Pranayama:

- NadiShodana pranayama (5 rounds)
- Bhramari pranayama (5 rounds)

Effect of Pranayama (Alternative Nostril Breathing) on Physiological Outcomes among Elderly with Hypertension in Selected Old Age Homes at Mangaluru., by P S Sreekanth et al., in 2019 stated that BP, respiration, and pulse rate can be decreased by Nadishodanapranayama. Hence, this technique can be used as a regular practice for combating the stress and strain of everyday life. The findings of the study showed that

pranayama therapy was effective to reduce the physiological outcomes among elderly with hypertension.

Effect of Nadi Sodhan Pranayam and Brahmari Pranayam on selected hematalogical variables of old age people, by Sunil Yadav and Ashwani Kumar, in 2015, found that Nadi sodhan Pranayama & bhramri Pranayama can be an effective training programme to increase the selected hematological variables of old age people.

Dhyana: Meditative Practices - Preliminary Stages(15 minutes)–Done with light soothing music.

Effect of meditation on cognitive functions in context of aging and neurodegenerative diseases, by Rafał Marciniak, Katerina Sheardova1, Pavla Čermáková1et al., in 2014, suggested a positive effect of meditation techniques, particularly in the area of attention, as well as memory, verbal fluency, and cognitive flexibility. These findings are discussed in the context of MRI studies suggesting structural correlates of the effects. Meditation can be a potentially suitable non-pharmacological intervention aimed at the prevention of cognitive decline in the elderly.

Probable outcome of the intervention:

It is estimated that through the application of the above intervention, there is an overall improvement in the quality of life of individual as a whole.

Also, we hypothesize that asanas, pranayama and dhyana mentioned in the protocol improves faculties of physical, mental and spiritual level and thus uplift the life of the older individuals of the society.

4. MATERIALS AND METHODS

The title of the study is an observational study to evaluate the improvement in quality of life of the elderly by the practice of 'asana', 'pranayama', and 'dhyana'.

The asanas are selected by the help of a group discussion and review with concerned yoga lecturers, practitioners and students together with appropriate literary support.

The time interval for each yoga technique were fixed following the selection criteria and with age of the individual kept in mind.

Workshops: Seminar was conducted after the completion of intervention in which talks were delivered by established yoga practitioners who told the importance of yoga in daily life. They also gave insights on the following topics:

- Yoga and dhyana for senior citizens- Dr. Raghavendra Pai
- Suryanamaskara and its importance- Dr. Gurubhasavaraj
- Mudra and Pranayama- Yogatma Srihari

All the three resource persons gave excellent talks including practice of some simple yoga techniques which kept the audience glued to their seats.

It also motivated the audience to practice yoga as a part and parcel of the daily life.

Preparation of Registration and feedback form: Registration form and feedback were prepared after the discussion with the guide and experts and necessary questions were included, standardized and then finalized.

MATERIALS:

- A Protocol of yoga for 1 hour has been prepared after discussing with the peer group,resource persons of yoga and referring to the classical texts of yoga, which is used in this study to improve the cognitive functions among children.
- Certification has been done by the investigator about disclosing the details of the project to the students.
- Banner of inauguration and seminar -copy of it is attached in Annexure 1.
- Inauguration was done before the starting of the yoga sessions, a copy of the invitation has been attached in Annexure 2.
- Seminar was done after the completion of the yoga sessions, a copy of the invitation for the seminar has been attached in Annexure 3.
- The scale used to assess the cognitive functions is QOL, a copy of it form has been attached in Annexure 4.
- Registration forms were used to register the students for the yoga sessions for the 15 days, a copy of it form has been attached in Annexure 5.
- Consent by the subjects has been taken and a detailed case history of each student in the case and control group has been taken from a standardised case history format a copy of it form has been attached in Annexure 6.

YOGA PROTOCOL

Yoga protocol interventions are designed after discussion with peer group, peer group consists of:

President: Dr Radha krishna Ram Rao, Principal GNCYMC&H, Mysuru

Members: Dr Lakshminarayana Shenoy B Assistant Director, GARC, Mysuru

Dr Jisha , Assistant professor, GNCYMC&H, Mysuru

Dr Bharath Chandra, Assistant professor, GNCYMC&H, Mysuru

Dr Suma, Assistant professor, GNCYMC&H, Mysuru

Dr Suman, Assistant professor, GNCYMC&H, Mysuru

Secretary: Dr Deepak, Associate professor, GNCYMC&H, Mysuru

The above group is created by Principal GNCYMC&H and the protocol is designed by the Peer group after that ethical committee approval is taken from the institutional ethical committee of GNCYMC&H, Mysuru.

Table 1: Intervention Method

INTERVENTION METHOD	DURATION
Preparatory Practice- SukshmaVyayama	7 minutes
Asanas (any five mentioned)- Tadasana	10 counts
Ardhapawanamukthasana	10 counts
Makarsana	20 counts
Bhujangasana	10 counts
ArdhaMatsyendrasana/ Vakrasana	10 counts
Sukhasana	20 counts
Shavasana	15 minutes
Pranayama- Nadishodhana	5 rounds
Brahmari	5 rounds
Dhyana with soothing music	15 minutes
	Total Duration: 1 hour

METHODOLOGY:

Source of data: Data is collected from 2 day care centres from in and around Kuvempunagar.

Selection type: Randomized selection, with permission and consent of the respected individual and management authority.

Sample Size: 30

Group A- intervention group,

Group B- control group; randomly allocated 15 sample size in each of the group.

Group A (intervention group): Randomized case trials: Yoga sessions are conducted for 15 days and temperature, blood pressure, pulse and respiratory rate checked regularly before and after the session.

Group B (control): Randomized control trials: No Yoga sessions conducted, but temperature, blood pressure, pulse and respiratory rate checked regularly.

Inclusion Criteria:

- The subjects who are of age of 60 – 75 years with or without comorbid factors are included in the study.
- Subjects of either sex are included in the study.
- Subjects who are willing to give consent to participate in the study are included in the study.

Exclusion criteria:

- The subjects who are having severe systemic illness, hemiparesis, cancer, paraplegia, and those who are bedridden are to be excluded in the study.

Tools: WHOQOL (WHO – Quality of Life Scale) – bref[22]:

The WHO quality of life scale – brief, is a subset of 26 items taken from WHOQOL-100. This scale produces a profile with four domain scores and two individually

scored items about an individual's perception of quality of life and health. High scores indicate a high quality of life. Three of the questions have reversed scoring.

Domains with scoring range are as follows:

Overall quality of life and general health (2-10)

Domain 1: Physical health (7- 35)

Domain 2: Psychological (6- 30)

Domain 3: social relationships (3- 15)

Domain 4: Environment(8- 40)

All questions answered within a score range of (1-5)[7]

MATERIALS:

1. Sukhsmavyayma

a) Griva Shakthi Vikasaka- 1:

POSTURE: Keep your feet together, stand erect.

EXERCISE A: Relaxing your head, turn your head towards right shoulder then left.

EXERCISE B: Standing erect, turn your head forwards then backwards. When it goes back, it should touch the nape of the neck. When it is forward, chin should touch the sternal notch. Keep breathing normally.

Practice 10 times.

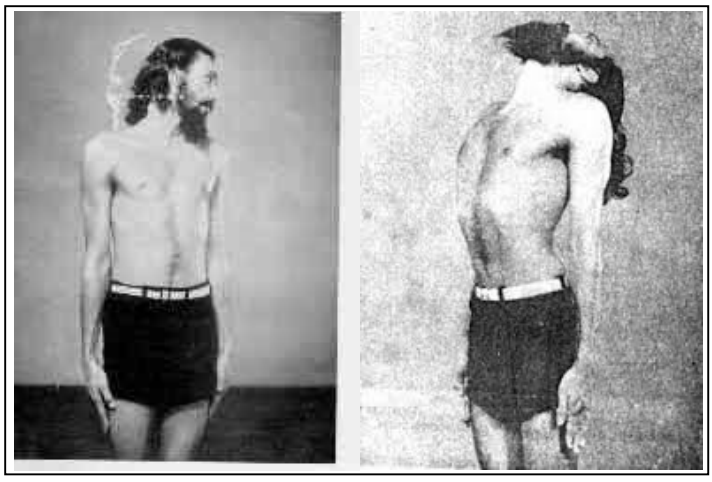


Fig: 1

b) Griva Shakthi Vikasaka- 2:

POSTURE: Keep your feet close together, back straight, mouth closed and eye wide open.

EXERCISE: Keep your chin in and rotate your head from left to right and then right to left alternatively. Breathe normally. Try to make your ear touch your shoulder, taking care to avoid raising the shoulder. Practice 5 times each side.

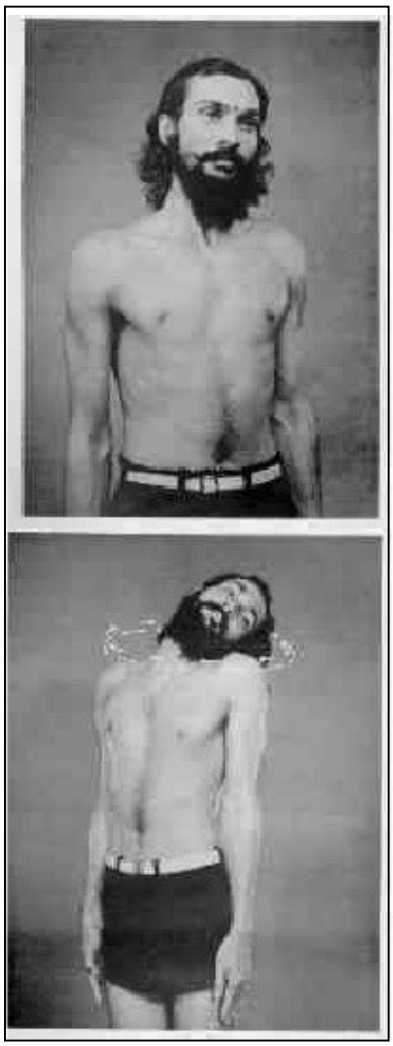


Fig: 2

c) Bhuja Valli Shakthi Vikasaka:

POSTURE: Feet together, the body straight, arms by the side.

EXERCISE: Bring both arms by the side of body. Both arms should go up and down together but the arms should not touch the head nor hands touch each other.

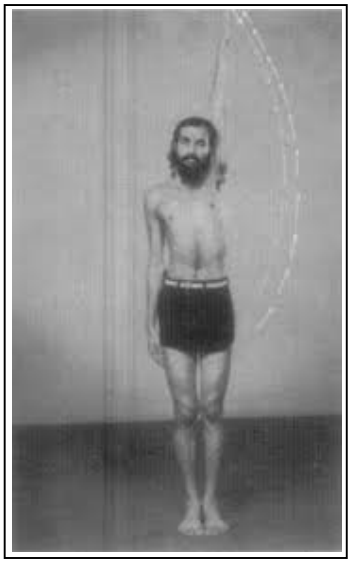


Fig: 3

d) Mani Bandha Shakthi Vikasaka:

POSTURE: Stand with feet close together, with the body straight. Stretch two arms straight in front of body at shoulder level,, keeping them parallel to the ground.

EXERCISE: With loosely clenched fists, let your wrists move the fists up and down. The arms should be kept as stiff as possible. Practice 5 times.

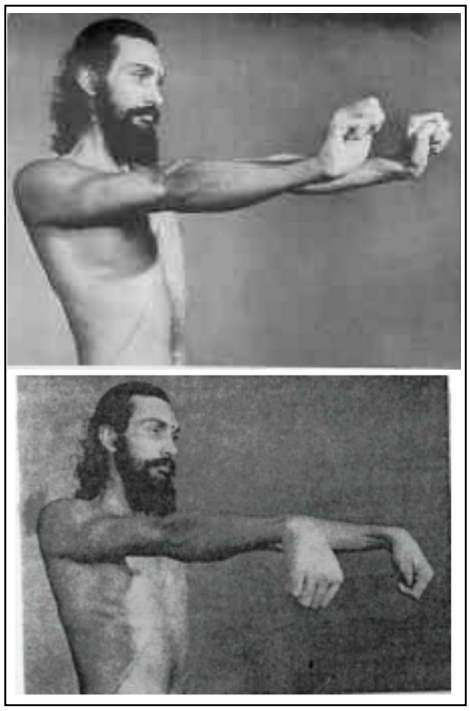


Fig: 4

e) Jangha shakthi Vikasaka:

POSTURE: With feet together, stand erect.

EXERCISE: Inhaling through the nose bend your knees gradually, with arms held out before the body, parallel to the ground. Stop when the thighs are parallel to the ground and try to maintain this position as long as you can. Do not raise heels off the ground. The knees must be together. Then, begin to raise gradually while exhaling.

Fig: 5

f) Gulpha Pada Prstha Pada Tala Shakthi vikasaka:

POSTURE: With the feet together, stand erect.

EXERCISE: Stretching forward one foot and holding it about 9 inches off the ground, describe a circle first from right to left, then from left to right, with the ankle. Repeat with other foot. Practice 10 times. This exercise removes rheumatism of feet and strengthens toes and feet[22].

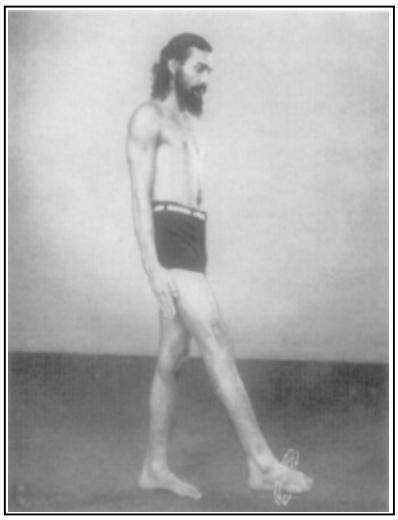


Fig: 6

2. Tadasana(palm tree pose)

Stand with the feet together or about 10 cm apart, and the arms by the sides. Steady the body and distribute the weight equally on both feet. Raise the arms over the head. Interlock the fingers and turn the palms upward. Place the hands on top of the head. Fix the eyes at a point on the wall slightly above the level of the head. The eyes should remain fixed on this point throughout the practice. Inhale and stretch the arms, shoulders and chest upward. Raise the heels coming up onto the toes. Stretch the whole body from top to bottom, without losing balance or moving the feet. Hold the breath and the position for a few seconds. At first it may be difficult to maintain balance but with practice it becomes easier. Lower the heels while breathing out and bring the hands to the top of the head. This is one round.

Relax for a few seconds before performing the next round. Practice 5 to 10 rounds.

Breathing: The breath should be synchronized with the raising and lowering of the arms.

Awareness: Physical - on the breathing, maintaining balance and the stretch of the whole body from top to bottom. Spiritual - initially on 'mooladhara' chakra to provide stability; once balance is achieved, change to 'ajna'.

Benefits: This asana develops physical and mental balance. The entire spine is stretched and loosened, helping to clear up congestion of the spinal nerves at the points where they emerge from the spinal column. 'Tadasana' stretches the rectus abdomini muscles and the intestines[24].

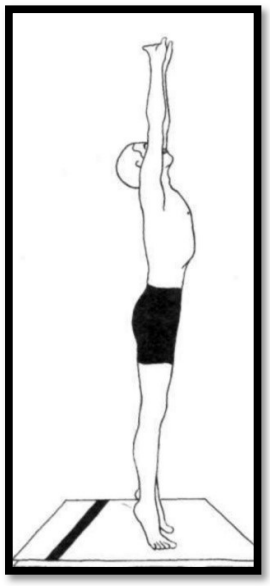


Fig: 7

2. Ardhapawanamuktasana

Lie in the base position. Bend the right knee and bring the thigh to the chest. Interlock the fingers and clasp the hands on the shin just below the right knee. Keep the left leg straight and on the ground. Inhale deeply, filling the lungs as much as possible. Holding the breath, raise the head and shoulders off the ground and try to touch the right knee with the nose. Remain in the final position for a few seconds, retaining the breath and counting mentally. While slowly exhaling, return to the base position. Relax the body. Repeat 3 times with the right leg and then 3 times with the left leg.Follow with the left leg which presses the descending colon directly.

Awareness: On the breath, mental counting in the final position, pressure on the abdomen and the movement.

Benefits: Suptapawanmuktasana strengthens the lower back muscles and loosens the spinal vertebrae. It massages the abdomen and the digestive organs and is, therefore, very effective in removing wind and constipation[24].

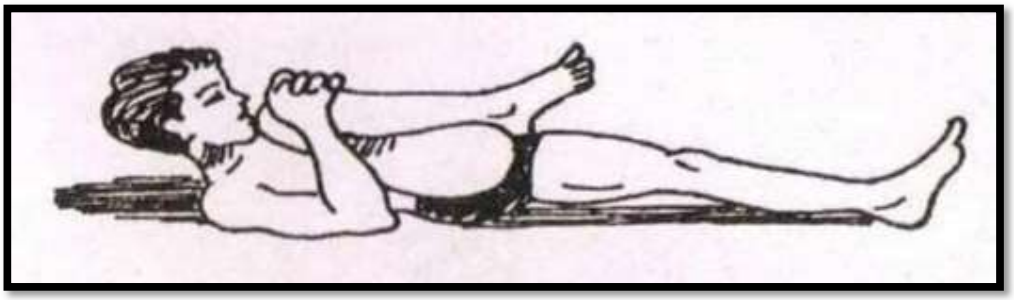


Fig: 8

4. Makarasana (crocodile pose)

Lie flat on the stomach. Raise the head and shoulders and rest the chin in the palms of the hands with the elbows on the floor. Keep the elbows together for a more pronounced arch to the spine. Separate the elbows slightly to relieve excess pressure on the neck. In makarasana the effect is felt at two points: the neck and the lower back. If the elbows are too far in front, tension will be felt in the neck; if they are drawn too close to the chest, tension will be felt more in the lower back. Adjust the position of the elbows so that these two points are equally balanced. The ideal position is when the whole spine is equally relaxed. Relax the whole body and close the eyes.

Breathing: Natural and rhythmic.

Duration: For as long as possible.

Awareness: Physical - on the breathing process or counting the breath with concentration on the lower back, and relaxing the whole body. Spiritual - on manipura chakra or on the nose tip if practicing nasikagradrishti.

Benefits: This asana is very effective for people suffering from slipped disc, sciatica, lower back pain or any other spinal disorder. They should remain in this asana for extended periods of time as it encourages the vertebral column to resume its normal shape and releases compression of the spinal nerves. Asthmatics and people who have any other lung ailments should practice this simple asana regularly with breath awareness as it allows more air to enter the lungs[24].

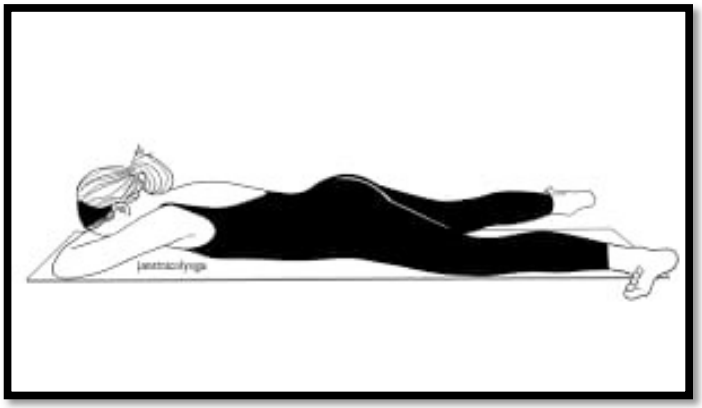


Fig: 9

5. Bhujangasana (cobra pose)

Lie flat on the stomach with the legs straight, feet together and the soles of the feet uppermost. Place the palms of the hands flat on the floor, below and slightly to the side of the shoulders. The fingers should be together and pointing forward. The arms should be positioned so that the elbows point backward and are close to the sides of the body. Rest the forehead on the floor and close the eyes. Relax the whole body,

especially the lower back. Slowly raise the head, neck and shoulders. Straightening the elbows, raise the trunk as high as possible. Use the back muscles more than the arm muscles. Be aware of using the back muscles first while starting to raise the trunk. Then use the arm muscles to raise the trunk further and arch the back. Gently tilt the head backward, so that the chin points forward and the back of the neck is compressed. In the final position, the pubic bone remains in contact with the floor and the navel is raised a maximum of 3 cm. If the navel is raised too high, the bend tends to be in the knees and not in the back. The arms may or may not be straight; this will depend on the flexibility of the back. Hold the final position. To return to the starting position, slowly bring the head forward, release the upper back by bending the arms, lower the navel, chest, shoulders and finally the forehead to the floor. Relax the lower back muscles. This is one round.

Breathing: Inhale while raising the torso. Breathe normally in the final position or retain the breath if the pose is held for a short time. Exhale while lowering the torso.

Duration: Practise up to 5 rounds, gradually increasing the length of time in the final position.

Awareness: Physical - on synchronizing the breath with the movement and the smooth, systematic arching movement of the back.

Spiritual - on swadhisthana chakra.

Benefits: This asana can relocate slipped disc, remove backache and keep the spine supple and healthy. A stiff spine interferes with all nervous impulses sent from the brain to the body and vice versa. By arching the spine, improving circulation in the

back region and toning the nerves, better communication between the brain and body results. This asana tones the ovaries and uterus, and helps alleviate menstrual and other gynaecological disorders. It stimulates the appetite, alleviates constipation and is beneficial for all the abdominal organs, especially the liver and kidneys. The adrenal glands, situated on top of the kidneys, are also massaged and stimulated to work more efficiently. The secretion of cortisone is maintained and the thyroid gland is regulated. On a pranic level, bhujangasana has a strong effect on all the organs related to swadhisthana, manipura, anahata and vishuddhi chakras[24].

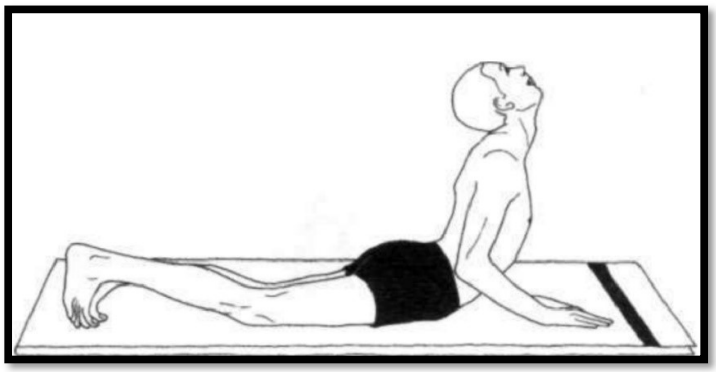


Fig: 10

6. Ardha Matsyendrasana (half spinal twist)

Sit with the legs stretched out in front of the body. Bend the right leg and place the right foot flat on the floor on the outside of the left knee. The toes of the right foot should face forward. Bend the left leg and bring the foot around to the right buttock. The outside edge of the foot should be in contact with the floor. Pass the left arm through the space between the chest and the right knee, and place it against the outside of the right leg- Hold the right foot or ankle with the left hand, so that the right knee is close to the left armpit. Sit up as straight as possible. Raise the right arm

in front of the body and gaze at the fingertips. Slowly twist to the right, simultaneously moving the arm, trunk and head. Use the left arm as a lever against the right leg to twist the trunk as far as possible without using the back muscles. Follow the tips of the fingers of the right hand with the gaze and look over the right shoulder.

Do not strain the back. Bend the right elbow and place the arm around the back of the waist. The back of the right hand should wrap around the left side of the waist. Alternatively, it can be placed as high as possible between the shoulder blades with the fingers pointing up. This arm position enforces the straightness of the spine. Reverse the movements to come out of the posture and repeat on the other side.

Breathing: Inhale in the forward position. Exhale while twisting the trunk. Breathe deeply and slowly without strain in the final position. Inhale while returning to the starting position.

Duration: Practise once on each side, gradually increasing the holding time to 1 or 2 minutes on each side of the body or up to 30 breaths.

Awareness: Physical - on keeping the spine straight and on the movement of the abdomen created by the breath in the final position. Spiritual - on ajna chakra.

Benefits: This asana simultaneously stretches the muscles on one side of the back and abdomen while contracting the muscles on the other side. It tones the nerves of the spine, makes the back muscles supple, relieves lumbago and muscular spasms, and reduces the tendency of adjoining vertebrae to develop osteophytes. When practised with care, it has proved beneficial for mild cases of slipped disc. Ardhamatsyendrasana massages the abdominal organs, alleviating digestive ailments.

It regulates the secretion of adrenaline and bile and is recommended in the yogic management of diabetes. Under special guidance it is used for the yogic management of sinusitis, hay fever, bronchitis, constipation, colitis, menstrual disorders, urinary tract disorders and cervical spondylitis, as long as it can be performed without any discomfort[24].

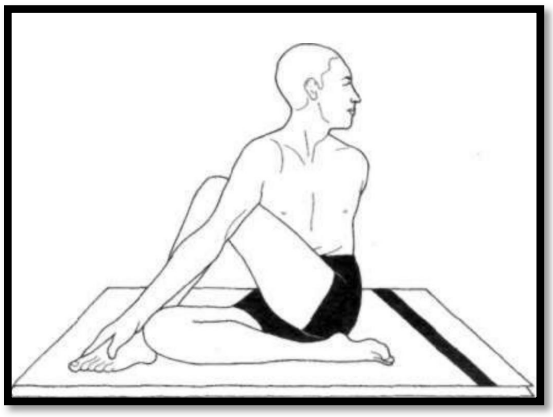


Fig: 11

7. Sukhasana(easy pose)

Sit with the legs straight in front of the body. Bend the right leg and place the foot under the left thigh. Bend the left leg and place the foot under the right thigh. Place the hands on the knees in chin or jnana mudra. Keep the head, neck and back upright and straight, but without strain. Close the eyes. Relax the whole body. The arms should be relaxed and not held straight.

Benefits: Sukhasana is the easiest and most comfortable of the meditation postures. It can be utilised without ill effect by persons who are unable to sit in the more difficult meditation postures. It facilitates mental and physical balance without causing strain or pain[23].

Fig: 12

8. Shavasana(corpse pose)

Lie flat on the back with the arms about 15 cm away from the body, palms facing upward. A thin pillow or folded cloth may be placed behind the head to prevent discomfort. Let the fingers curl up slightly. Move the feet slightly apart to a comfortable position and close the eyes. The head and spine should be in a straight line. Make sure the head does not fall to one side or the other. Relax the whole body and stop all physical movement. Become aware of the natural breath and allow it to become rhythmic and relaxed.

Awareness: Physical - first on relaxing the whole body, then on the breath and counting. Spiritual - on ajna chakra.

Benefits: This asana relaxes the whole psycho-physiological. It should ideally be practiced before sleep; before, during and after asana practice, particularly after dynamic exercises such as suryanamaskara; and when the practitioner feels physically

and mentally tired. It develops body awareness. When the body is completely relaxed, awareness of the mind increases, developing pratyahara[24].

DRT- Deep relaxation Technique practiced along with Shavasana with relaxation given to each part of the body.

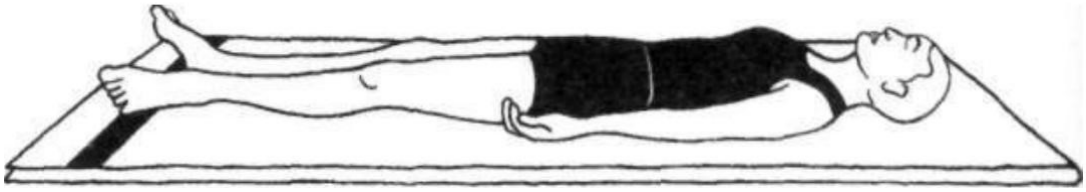


Fig: 13

9. NadiShodhana Pranayama (psychic network purification)

Inhale through the left nostril. Retain the breath inside in antarkumbhaka. Exhale through the right nostril. After exhalation, when the lungs are deflated as much as possible, close both nostrils and hold the breath out for the chosen count. The glottis may be slightly contracted to hold the air out of the lungs. Exhale slightly through the right nostril immediately before inhaling. This will release the lock on the lungs and the glottis and bring the respiratory system smoothly back into operation. Inhale slowly through the right nostril. Retain the breath inside in antarkumbhaka. Exhale through the left nostril. Again, hold the breath out in bahirkumbhaka to the count, with both nostrils closed.

This is one round. Remember to exhale slightly through the right nostril before breathing in at the start of the next round.

Awareness: Physical - on the breath and the counting. Mental - it is easy for the mind to wander during nadishodhana. Simply be aware of this wandering tendency of the mind, continue the practice and the count. This will automatically encourage the awareness to return to the practice. Spiritual - on ajna chakra.

Duration: 5 rounds

Benefits: Nadishodhana ensures that the whole body is nourished by an extra supply of oxygen. Carbon dioxide is efficiently expelled and the blood is purified of toxins. The brain centres are stimulated to work nearer to their optimum capacity. It also induces tranquillity, clarity of thought and concentration, and is recommended for those engaged in mental work. It increases vitality and lowers levels of stress and anxiety by harmonising the pranas. It clears pranic blockages and balances ida and pingalanadis, causing sushumnanadi to flow, which leads to deep states of meditation and spiritual awakening[24].

Fig: 14

10. Bhramari Pranayama (humming bee breath)

Sit in a comfortable meditation asana. The spinal cord should be erect, the head straight and the hands resting on the knees in chin or jnana mudra. The ideal posture for this practice is padmasana or siddha / siddha yoni asana. The position of nadanusandhana asana, which is used in nada yoga, may also be utilized as follows. Sit on a rolled blanket with the heels drawn up to the buttocks. Place the feet flat on the floor with the knees raised and the elbows resting on the knees. Close the eyes and relax the whole body for a short time. The lips should remain gently closed with the teeth slightly separated throughout the practice. This allows the sound vibration to be heard and felt more distinctly in the brain. Make sure the jaws are relaxed. Raise the arms sideways and bend the elbows, bringing the hands to the ears. Use the index or middle finger to plug the ears. The flaps of the ears may be pressed without inserting the fingers. If the position of nadanusandhana has been assumed, plug the ears with the thumbs, resting the other four fingers on the head. Bring the awareness to the centre of the head, where ajnachakra is located, and keep the body absolutely still. Breathe in through the nose. Exhale slowly and in a controlled manner while making a deep, steady humming sound like that of the black bee. The humming sound should be smooth, even and continuous for the duration of the exhalation. The sound should be soft and mellow, making the front of the skull reverberate. This is one round. At the end of exhalation, breathe in deeply and repeat the process. Perform 5 rounds.

Awareness: Physical - on the humming sound within the head and on making the breath steady and even. Spiritual - on ajna chakra.

Benefits: Bhramari relieves stress and cerebral tension, alleviating anger, anxiety and insomnia, and reducing blood pressure. It speeds up the healing of body tissue and may be practiced after operations. It strengthens and improves the voice and eliminates throat ailments[24].

Fig: 15

11) Dhyana:

Preliminary Steps to meditative practices:

- Start with Invocation: Pray to God or Almighty or Guru to help with meditation.
- Mention Specific Requests or Prayers or Healing Needs: This is called Sankalpa or resolve, to get help for specific needs. For example: "I seek Lord _____'s help in healing my body from the ailment of _____.
- Make Positive Affirmations: Affirmations are statements made with full belief that what we want is already given to us or accomplished. It's made in the present tense. Repeat it thrice to imprint it in the mind.
- Mind Focus: Quieten down the thoughts to attain focused mind.

- The Practice of Now: For next five minutes one should avoid any thought of the past, the past hour, yesterday, last year or several years ago.
- Awareness Listening: Keep your eyes closed, avoid all extraneous thoughts. Listen to all the sounds- focus on both pleasant and unpleasant sounds. Take deep breaths. Focus on the smells from plants, flowers, etc. Feel the air rubbing over the skin.
- Slowly open the eyes[25].

RESEARCH FINDINGS:

A study by Kripesh Karmakar and Dr Gaurav Pant in in 2016 found that Though there was no significant level of change in Quality of Life of Male Senior Citizens, after 45 days of Yoga intervention, yet there was a little improvement observed after the end of Yoga intervention. The results conclude that the Yoga intervention for a longer period may have highly significant level of change in the Quality of Life of Male Senior Citizens.

The article, Envisioning Yoga Therapy as A Stride towards Successful Ageing by K K Boban et al., in 2014, reported that men showed more improvement in their ―joint‖ functions. Group sessions helped them among themselves, through their mutual support and motivational approaches and there was a significant role of Yoga Therapy in rehabilitation of elderly especially who are suffering from rheumatoid arthritis.

Effect of Yoga on Cardiac Health, Sleep Quality, Mental Health and Quality of Life of elderly individuals with chronic ailments: a single arm pilot study, by Ashwin Hegde, H R Nagendra et al., in 2017, reported that It was observed a significant

decrease in pulse rate, respiratory rate, Systolic BP, Diastolic BP, perceived stress, fasting sugar, anxiety, depression, along with significant improvements in sleep quality and quality of life after one month of IY intervention compared to baseline. There is a potential role of yoga practice in improving sleep quality, mental health and QoL of elderly individuals with chronic ailments.

Effects of yoga intervention on sleep and quality-of-life in elderly: A randomized controlled trial, by V R Hariprasad et al., in 2013 reported that subjects in the yoga group had significant improvement in all the domains of QOL and total sleep quality after controlling for the effect of baseline difference in education between the two groups.

Effect of Yoga on Balance in Geriatric Population, by Krishna Ketan Patel et al., in 2019, found that yoga exercises involve stretching and relaxing of muscles causing significant physical and mental exertion resulting in benefits like improved muscular strength and muscle mass which results in increased exercise capacity. Yoga exercises improve joint flexibility, prevent decline in the physical function, and improve the QOL of elderly people. Yogasanas are effective in improving balance in elderly individuals at the end of four weeks compared to control group. Thus, it can be used clinically to improve balance in geriatric population.

Role of yoga therapy in improving digestive health and quality of sleep in an elderly population: A randomized controlled trial, by Shree Ganesh et al., in 2021 stated that Wilcoxon's sign rank test has shown that the yoga group had statistically significant changes in most of the parameters in Pittsburg Sleep Quality Index (PSQI) and Patient Assessment of Constipation QoL (PAC-QOL) ($P \leq 0.05$). Mann Whitney test revealed

that yoga group has better improvement in the sleep quality and constipation related QOL ($P \leq 0.05$) compared to the controls. The results signify yoga can ease old age related issues like constipation and insomnia. This is encouraging for inclusion of yoga as a daily practice regimen to improve the constipation and sleep related quality of life in elderly population.

Impact of long term Yoga practice on sleep quality and quality of life in the elderly, by M A Bankar et al., in 2013 reported that Total PSQI score in Yoga group was lower than that of the control group. Also various QOL scores of the Yoga groups were higher than the control group. Addition of regular Yoga exercises in the daily routine of elderly people can help to achieve good sleep quality as well as improve the QOL.

5. OBSERVATIONS

Table 2: Age wise distribution of subjects

Crosstab

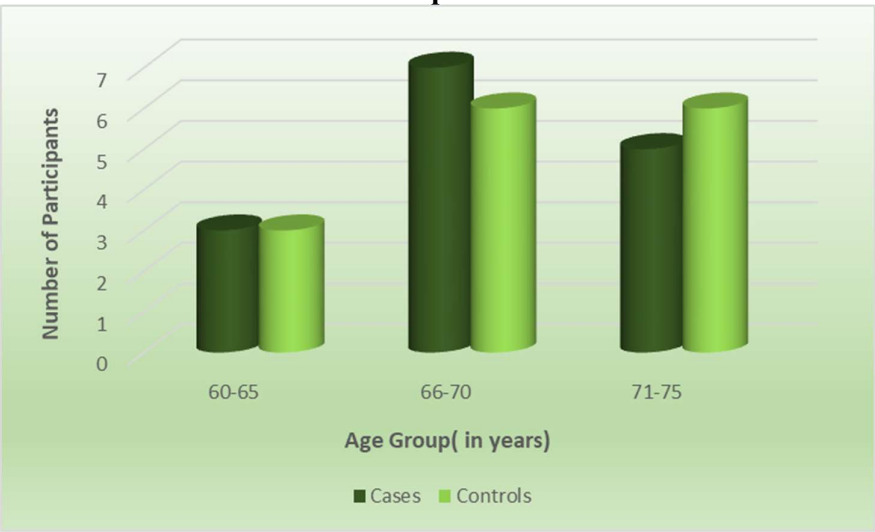
			groups		Total
			Cases	Controls	
Age	60-65	Count	3	3	6
		% within groups	20.0%	20.0%	20.0%
	66-70	Count	7	6	13
		% within groups	46.7%	40.0%	43.3%
	71-75	Count	5	6	11
		% within groups	33.3%	40.0%	36.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 3:

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.168	2	.920

Graph 1:



OBSERVATION:

There are 3 subjects in case group and 3 subjects in control group in the age group 60-65 years, 7 in cases and 6 in control group in the age group 66- 70 years, and in 71-75 years age group there are 5 subjects in cases and 6 in control group.

In total, there are 15 subjects in case and control group each.

Table 4: Sex wise distribution

Crosstab

			Groups		Total
			Cases	Controls	
Sex	Male	Count	14	10	24
		% within groups	93.3%	66.7%	80.0%
	Female	Count	1	5	6
		% within groups	6.7%	33.3%	20.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 5:

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	3.333	1	.068	
Fisher's Exact Test				.169

Graph 2:

OBSERVATION:

According to the data, there are 14 males in case group, and 10 males in control group. There is only one female in case group and there are 5 females in control group.

Table 6: Distribution on Education

Crosstab

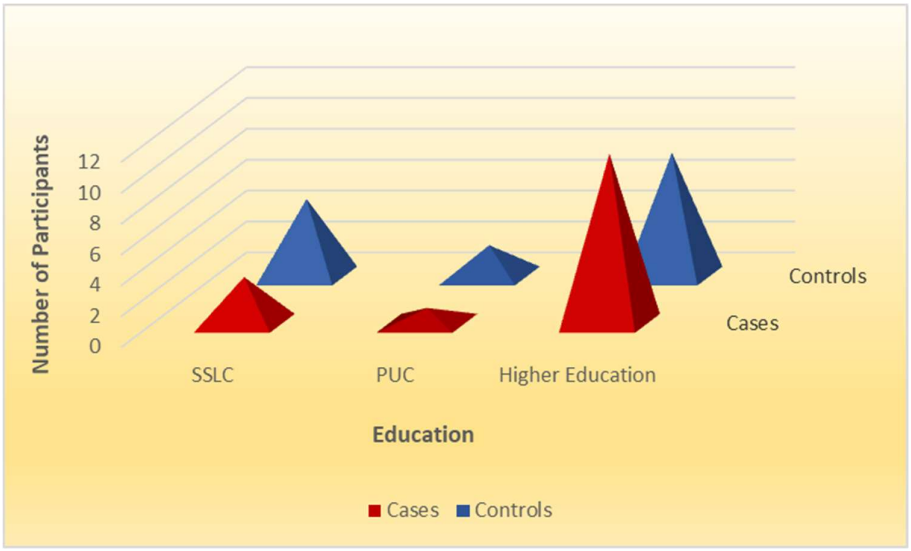
			Groups		Total
			Cases	Controls	
Education	SSLC	Count	3	5	8
		% within groups	20.0%	33.3%	26.7%
	PUC	Count	1	2	3
		% within groups	6.7%	13.3%	10.0%
	Higher Education	Count	11	8	19
		% within groups	73.3%	53.3%	63.3%
Total		Count	15	15	30
	% within groups		100.0%	100.0%	100.0%

Table 7:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.307	2	.520

Graph 3:



OBSERVATION:

According to the above data, 3 subjects in cases and 5 subjects in control group have completed their SSLC and one subject in case and 2 subjects in control have completed their education till PUC and 11 subjects in cases and 8 subjects in control group have completed their higher education.

Table 8: Distribution on occupation

Crosstab

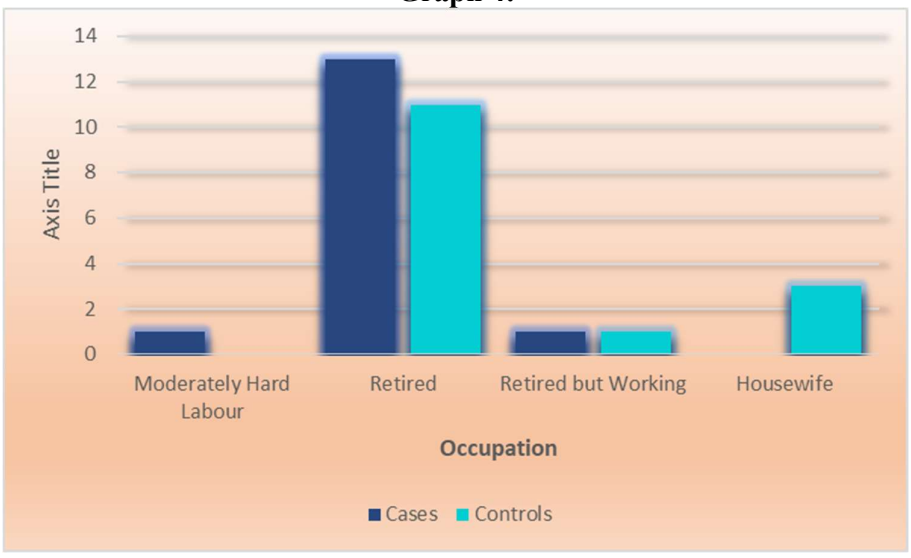
			Groups		Total
			Cases	Controls	
Occupation	Moderately hard labour	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Retired	Count	13	11	24
		% within groups	86.7%	73.3%	80.0%
	Retired but working	Count	1	1	2
		% within groups	6.7%	6.7%	6.7%
	Housewife	Count	0	3	3
		% within groups	0.0%	20.0%	10.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 9:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.167	3	.244

Graph 4:



OBSERVATION:

According to the data, there is one subject in case who does moderately hard labour. There are 13 subjects in cases and 11 subject in control group who have retired. There is one in each case and control group who are retired but still working and 3 females in control group who is housewife.

Table 10: Chief complaints

Crosstab

			groups		Total
			Cases	Controls	
Chief Complaints	Age related weakness	Count	5	10	15
		% within groups	33.3%	66.7%	50.0%
	Weakness and pain	Count	10	5	15
		% within groups	66.7%	33.3%	50.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 11:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	3.333	1	.068	
Fisher's Exact Test				.143

Graph 5:

OBSERVATION:

According to the above data, there are 5 subjects in cases and 10 in controls who have age related weakness as their complaint. There are 10 subjects in the case group and 5 in control who complain that they have weakness and pain.

Table 12: Complaint history

Crosstab

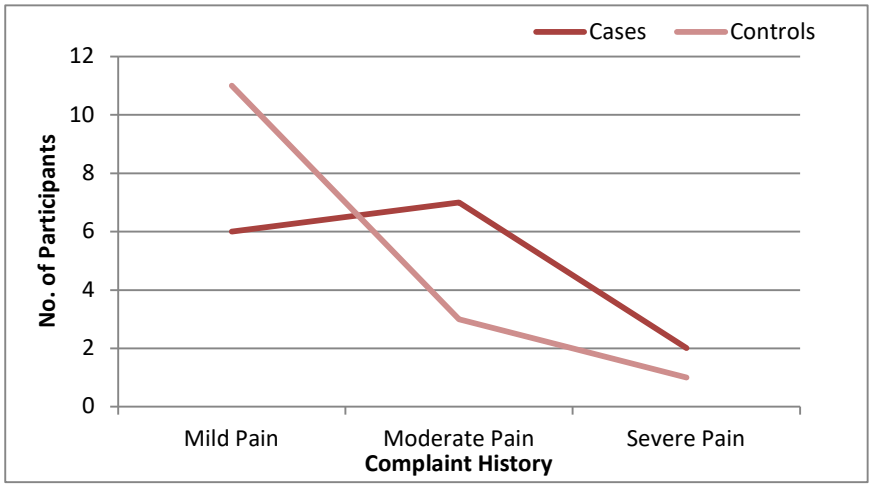
			Groups		Total
			Cases	Controls	
Complaint history	Mild pain	Count	6	11	17
		% within groups	40.0%	73.3%	56.7%
	Moderate pain	Count	7	3	10
		% within groups	46.7%	20.0%	33.3%
	Severe pain	Count	2	1	3
		% within groups	13.3%	6.7%	10.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 13:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.404	2	.182

Graph: 6



OBSERVATION:

According to the above data, 6 subjects in case group and 11 subjects in control group have mild pain. There are 7 subjects in case group and 3 in control group who have moderate pain and 2 in cases and 1 in control group have severe pain as their complaint.

Table 14: Past history

Crosstab

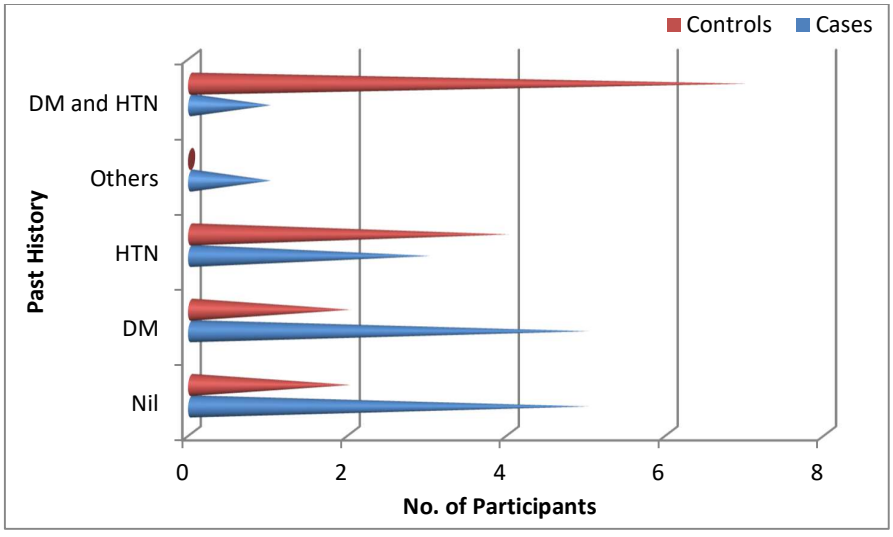
			Groups		Total
			Cases	Controls	
Past history	Nil	Count	5	2	7
		% within groups	33.3%	13.3%	23.3%
	DM	Count	5	2	7
		% within groups	33.3%	13.3%	23.3%
	HTN	Count	3	4	7
		% within groups	20.0%	26.7%	23.3%
	Others	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	DM and HTN	Count	1	7	8
		% within groups	6.7%	46.7%	26.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 15:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.214	4	.084

Graph 7:



OBSERVATIONS:

According to the above data, there are 5 subjects in cases and 2 subjects in control group who don't have any past history, and the same number has diabetes mellitus, 3 subjects in cases and 4 in control group have hypertension, while 1 in case and 7 participants in control group have both hypertension and diabetes mellitus and one in the case group has other past history.

Table 16: Treatment history

Crosstab

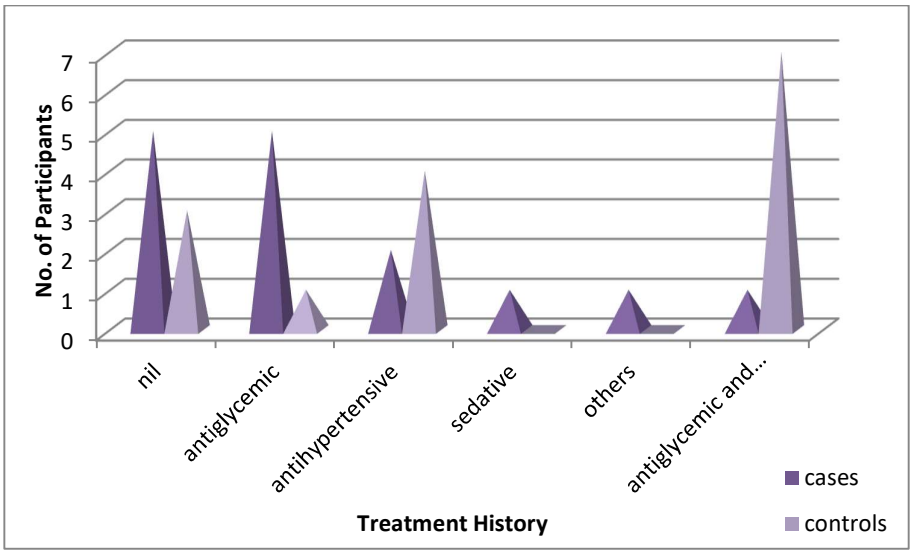
			groups		Total
			Cases	Controls	
Treatment history	Nil	Count	5	3	8
		% within groups	33.3%	20.0%	26.7%
	Anti-glycemic	Count	5	1	6
		% within groups	33.3%	6.7%	20.0%
	Anti-hypertensive	Count	2	4	6
		% within groups	13.3%	26.7%	20.0%
	Sedatives	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Others	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Antiglycemic and Antihypertensive	Count	1	7	8
		% within groups	6.7%	46.7%	26.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 17:

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.333	5	.066

Graph 8:



OBSERVATION:

According to the data, there are 5 subjects in cases and 3 subjects in control group taking no medications. There are 5 subjects in cases and 1 in control taking antiglycemic drugs. There are 2 subjects in cases and 4 in control group taking antihypertensive medications while there is one subject in case group having sedatives. There is one subject in case group and 7 in control having both antihypertensives and antiglycemic drugs and one in case group taking other medications.

Table 18: Family history

Crosstab

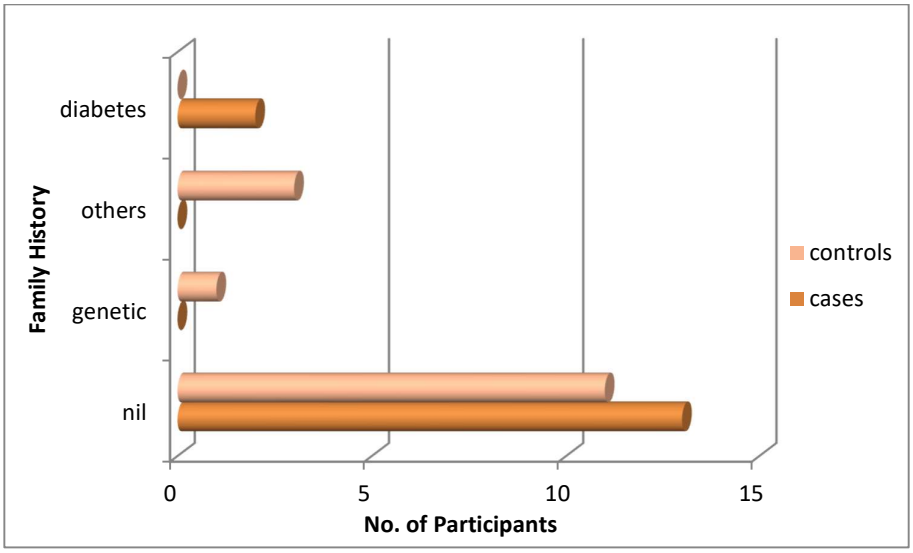
			groups		Total
			Cases	Controls	
Family history	Nil	Count	13	11	24
		% within groups	86.7%	73.3%	80.0%
	Genetic	Count	0	1	1
		% within groups	0.0%	6.7%	3.3%
	Others	Count	0	3	3
		% within groups	0.0%	20.0%	10.0%
	Diabetes	Count	2	0	2
		% within groups	13.3%	0.0%	6.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 19:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.167	3	.104

Graph 9:



OBSERVATIONS:

According to the data above, 13 subjects in cases and 11 subjects in control group do not have any family history. There is one subject with a history of genetic condition in control group. 2 subjects in case group has diabetes while 3 in control group has other family history.

Table 20: Diet

Crosstab

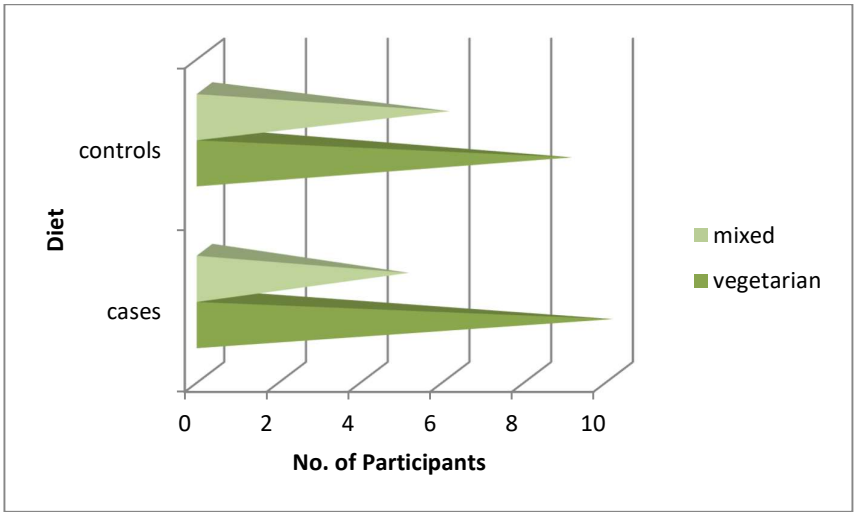
			groups		Total
			Cases	Controls	
Diet	Vegetrian	Count	10	9	19
		% within groups	66.7%	60.0%	63.3%
	Mixed	Count	5	6	11
		% within groups	33.3%	40.0%	36.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 21:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.144	1	.705	
Fisher's Exact Test				1.000

Graph 10:



OBSERVATIONS:

According to the data above, the vegetarians in the case group are 10 in number while in the control group are 9. Subjects who have mixed diet in cases and controls are 5 and 6 respectively.

Table 22: Sleep * groups

Crosstab

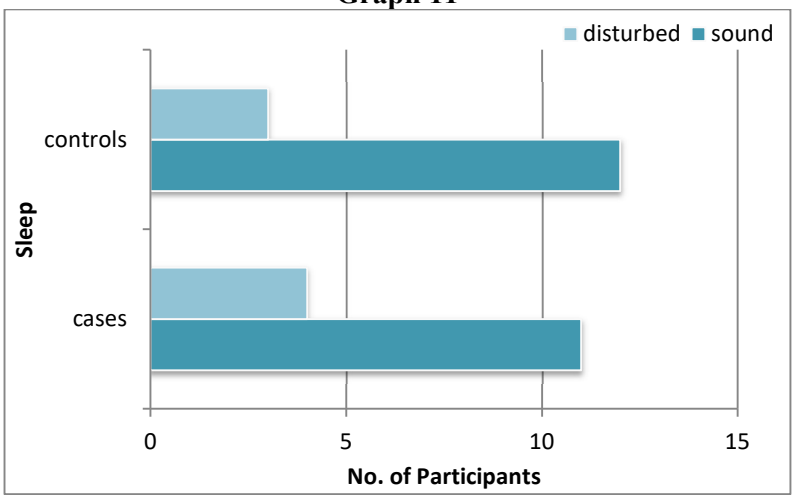
			groups		Total
			Cases	Controls	
sleep	Sound	Count	11	12	23
		% within groups	73.3%	80.0%	76.7%
	Distrubed	Count	4	3	7
		% within groups	26.7%	20.0%	23.3%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 23:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.186	1	.666	
Fisher's Exact Test				1.000

Graph 11



OBSERVATIONS:

According to the data above, there are 11 participants in cases group who have sound sleep and 13 participants in control group have sound sleep. There are 4 participants in cases group and 3 in control group who have disturbed sleep.

Table : 24 Addiction * groups

Crosstab

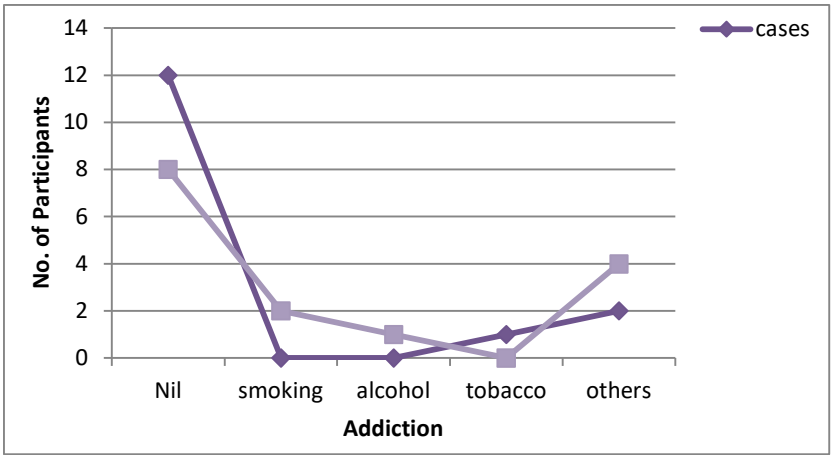
			groups		Total
			Cases	Controls	
addiction	Nil	Count	12	8	20
		% within groups	80.0%	53.3%	66.7%
	Smoking	Count	0	2	2
		% within groups	0.0%	13.3%	6.7%
	Alcohol	Count	0	1	1
		% within groups	0.0%	6.7%	3.3%
	Tobacco	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Others	Count	2	4	6
		% within groups	13.3%	26.7%	20.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table: 25

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.467	4	.243

Graph:12



OBSERVATIONS:

According to the data, 12 participants in case group and 8 participants in control group have no addictions. 2 participants in the control group have smoking addiction and 1 in the control group have alcohol addiction. I participant in the case group have tobacco addiction while 2 in the case group and 4 in the control group have other addictions.

Table 26: Habit * groups

Crosstab

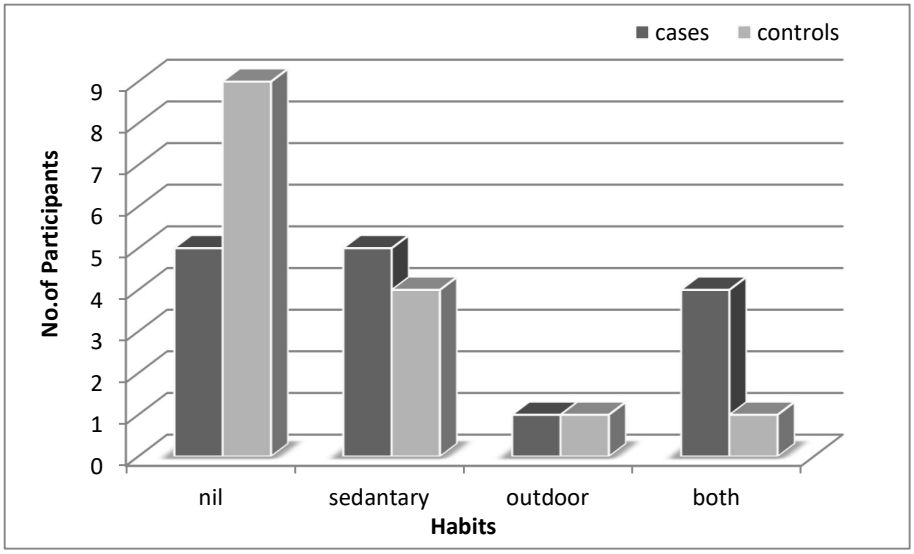
			groups		Total
			Cases	Controls	
habit	Nil	Count	5	9	14
		% within groups	33.3%	60.0%	46.7%
	Sedentary	Count	5	4	9
		% within groups	33.3%	26.7%	30.0%
	Outdoor	Count	1	1	2
		% within groups	6.7%	6.7%	6.7%
	Both	Count	4	1	5
		% within groups	26.7%	6.7%	16.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table: 27

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.054	3	.383

Graph:13



OBSERVATION:

According to the above data, 5 participants in case group and 5 participants in control group have no habits. 5 participants in case group and 4 in control group have sedentary habits while 1 participant in case group and 1 in control group have outdoor habits. 4 participants in case and 1 in control group have both habits.

Table 28: General Linear Model

Descriptive Statistics

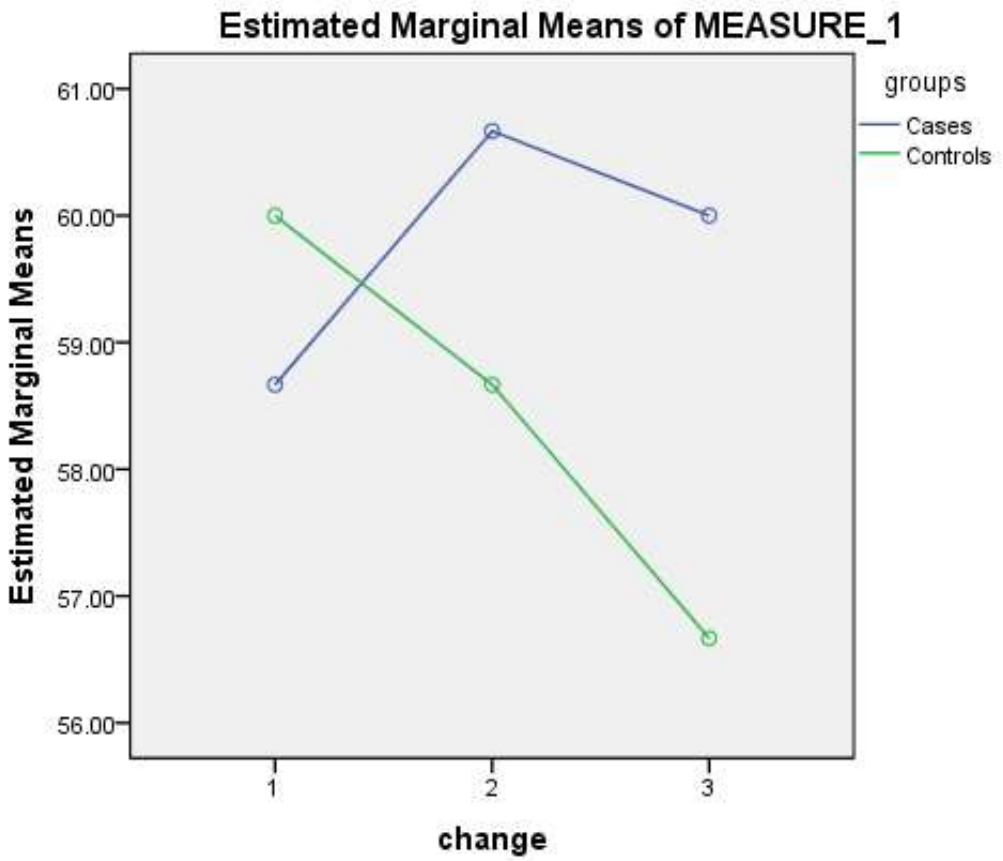
	groups	Mean	Std. Deviation	N
Pre-test Overall QoL	Cases	58.6667	10.60099	15
	Controls	60.0000	11.33893	15
	Total	59.3333	10.80655	30
Post-test Overall	Cases	60.6667	9.61150	15
	Controls	58.6667	11.25463	15
	Total	59.6667	10.33352	30
Follow-up Overall QoL	Cases	60.0000	9.25820	15
	Controls	56.6667	6.17213	15
	Total	58.3333	7.91478	30

Table 29: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
change	Sphericity Assumed	28.889	2	14.444	.462	.632
change * groups	Sphericity Assumed	86.667	2	43.333	1.386	.259
Error(change)	Sphericity Assumed	1751.111	56	31.270		

Graph 14



OBSERVATION:

The Overall assessment of all domains shows a significant improvement for case group when compared to control group. The observation in the graphical representation shows a significant exponential rise of scores of domains upto a certain level then it decreases slightly, which shows a marked improvement for the case group but for the control group there is a drastic decline for all domains in QOL scale which is slow but it is continuous. The Pearson Chi Square test for change between groups for Overall QOL is 0.632 and that for change within groups is 0.259.

Table 30: General Linear Model

Descriptive Statistics

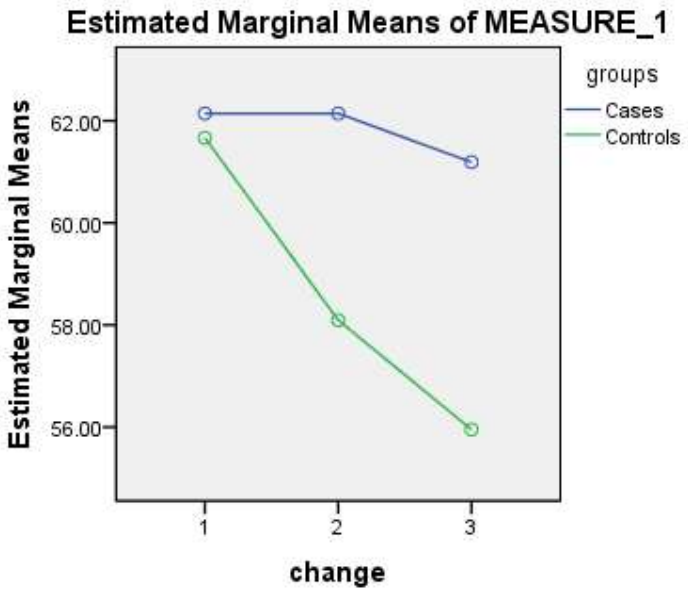
	groups	Mean	Std. Deviation	N
Pre-test domain 1	Cases	62.1429	9.90111	15
	Controls	61.6667	11.95737	15
	Total	61.9048	10.78928	30
Post-test domain1	Cases	62.1429	9.52594	15
	Controls	58.0952	8.37212	15
	Total	60.1190	9.04886	30
Followup domain1	Cases	61.1905	6.86536	15
	Controls	55.9524	5.16962	15
	Total	58.5714	6.53847	30

Table 31: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	166.950	2	83.475	3.468	.038
change * groups	92.120	2	46.060	1.913	.157
Error(change)	1348.073	56	24.073		

Graph 15: Profile Plots



OBSERVATION:

The Domain 1 of the QOL shows no significant improvement in the case group while there is sustainability of the scores compared to control group which significantly drops. The observation of the graphical representation shows a plateau upto a certain level and then slightly drops. In the control group, there is continuous and slow decrease in the scores. The Pearson Chi Square test for the change between the groups is 0.038 and that of change within the groups is 0.157.

Table 32: General Linear Model

Descriptive Statistics

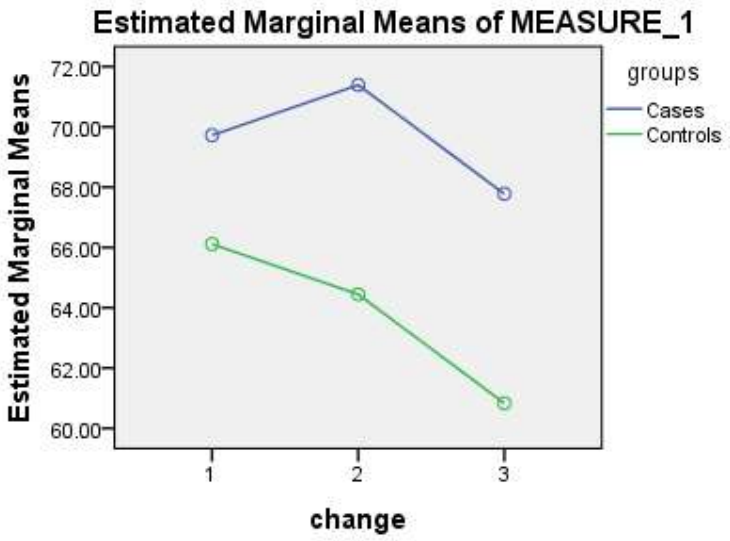
	groups	Mean	Std. Deviation	N
Pre-test domain2	Cases	69.7222	12.14441	15
	Controls	66.1111	7.85323	15
	Total	67.9167	10.21500	30
Post-test domain 2	Cases	71.3889	7.69371	15
	Controls	64.4444	8.60663	15
	Total	67.9167	8.76401	30
follow up domain 2	Cases	67.7778	7.29663	15
	Controls	60.8333	7.18243	15
	Total	64.3056	7.94221	30

Table 33: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	260.802	2	130.401	5.229	.008
change * groups	55.556	2	27.778	1.114	.335
Error(change)	1396.605	56	24.939		

Graph 16: Profile Plots



OBSERVATION:

The Domain 2 of the QOL assessment shows significant improvement in the intervention group which raises upto a certain level and then drops slightly. The graph for the control group shows gradual and slow decline. The Pearson Chi square test for the change between the groups is 0.008 and that of the change within groups is 0.335.

Table 34: General Linear Model

Descriptive Statistics

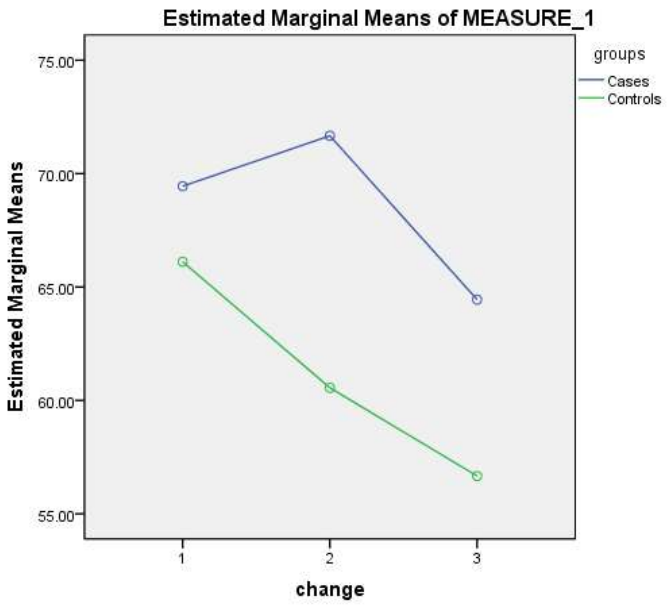
	groups	Mean	Std. Deviation	N
Pre-test domain3	Cases	69.4444	14.31874	15
	Controls	66.1111	20.76576	15
	Total	67.7778	17.60754	30
Post-test domain3	Cases	71.6667	10.35098	15
	Controls	60.5556	17.38530	15
	Total	66.1111	15.15143	30
Followup domain3	Cases	64.4444	11.12103	15
	Controls	56.6667	17.59329	15
	Total	60.5556	14.99255	30

Table 35: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	858.025	2	429.012	7.154	.002
change * groups	228.395	2	114.198	1.904	.158
Error(change)	3358.025	56	59.965		

Graph 17: Profile Plots



OBSERVATION:

The Domain 3 of the QOL shows a significant improvement in the case group compared to the control group but after a certain level it shows gradual and significant decline. The graph of the control group shows continuous decline. The Pearson Chi Square test for the change between the groups is 0.002 and that of change within the groups is 0.158.

Table 36: General Linear Model

Descriptive Statistics

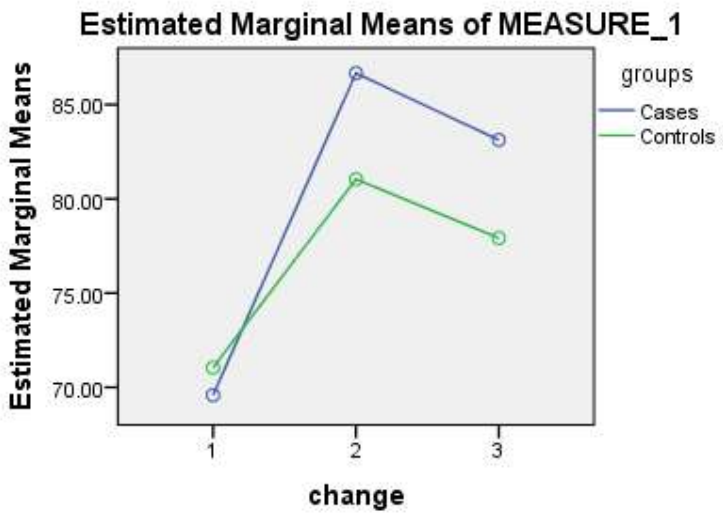
	Groups	Mean	Std. Deviation	N
Pre-test domain 4	Cases	69.5833	13.84840	15
	Controls	71.0417	9.77329	15
	Total	70.3125	11.80018	30
Post-test domain4	Cases	86.6667	10.79090	15
	Controls	81.0417	9.91500	15
	Total	83.8542	10.57619	30
Follow up domain 4	Cases	83.1250	11.25496	15
	Controls	77.9167	9.77329	15
	Total	80.5208	10.69019	30

Table 37: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	2986.979	2	1493.490	58.983	.000
change * groups	236.979	2	118.490	4.680	.013
Error(change)	1417.969	56	25.321		

Graph 18: Profile Plots



OBSERVATION:

The Domain 4 of the QOL shows significant exponential improvement in the case and control group. The improvement in the case group is higher compared to that of the control group. The graph shows a slight decline after the improvement in both the case and control group. The Pearson Chi square test for the change between the groups is 0.000 which implies that there is no change statistically, it may be attributed to small sample size while that of the change within the groups is 0.013.

6. RESULTS

Table 38 Age * groups

Crosstab

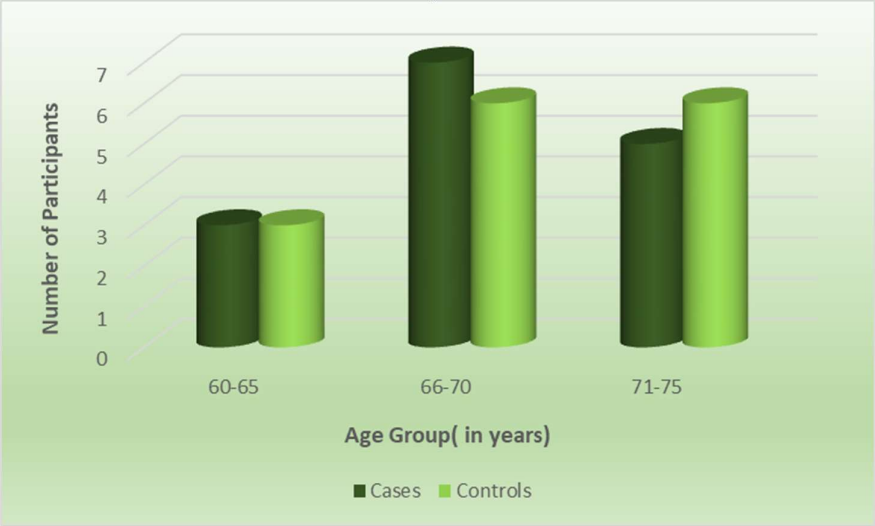
			groups		Total
			Cases	Controls	
Age	60-65	Count	3	3	6
		% within groups	20.0%	20.0%	20.0%
	66-70	Count	7	6	13
		% within groups	46.7%	40.0%	43.3%
	71-75	Count	5	6	11
		% within groups	33.3%	40.0%	36.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 39

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.168	2	.920

Graph 19



RESULT:

The Pearson Chi Square test is 0.920 which is insignificant. The insignificance might have occurred due to low sample number and covid restrictions.

Table 40: Sex * groups

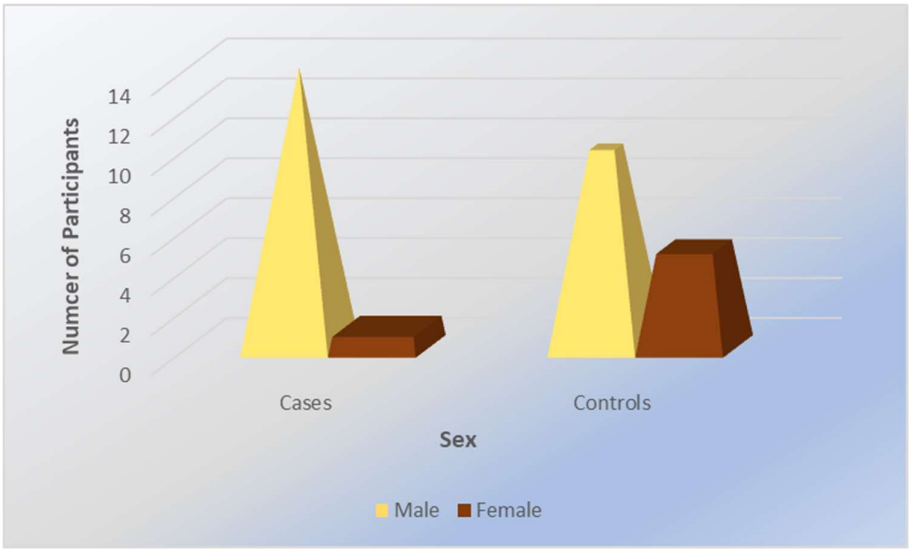
Crosstab

			Groups		Total
			Cases	Controls	
Sex	Male	Count	14	10	24
		% within groups	93.3%	66.7%	80.0%
	Female	Count	1	5	6
		% within groups	6.7%	33.3%	20.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 41
Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	3.333	1	.068	
Fisher's Exact Test				.169

Graph 20



RESULT:

The Fischer Extract test is 0.169 which is insignificant. The insignificance might have occurred due to low sample number and Covid restrictions.

Table 42: Education * groups

Crosstab

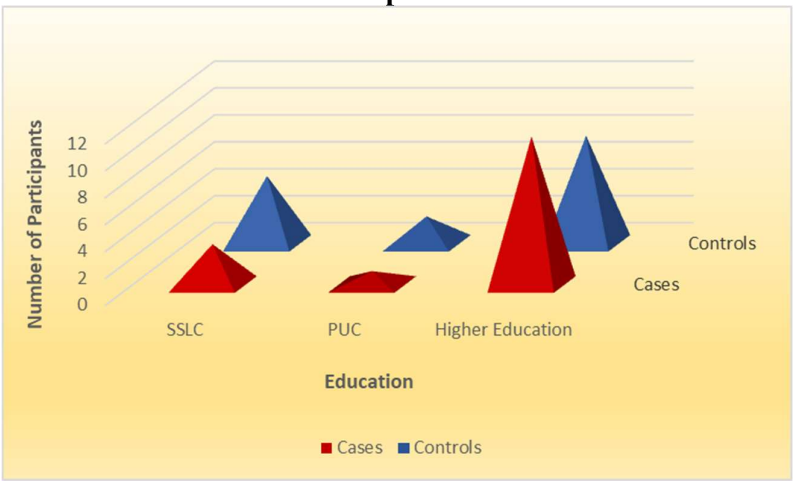
			Groups		Total
			Cases	Controls	
Education	SSLC	Count	3	5	8
		% within groups	20.0%	33.3%	26.7%
	PUC	Count	1	2	3
		% within groups	6.7%	13.3%	10.0%
	Higher Education	Count	11	8	19
		% within groups	73.3%	53.3%	63.3%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 43

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.307	2	.520

Graph 21



RESULT:

The Pearson Chi Square test is 0.520 and hence is insignificant. This insignificance is due to low sample number.

Table 44: Occupation * groups

Crosstab

			Groups		Total
			Cases	Controls	
Occupation	Moderately hard labour	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Retired	Count	13	11	24
		% within groups	86.7%	73.3%	80.0%
	Retired but working	Count	1	1	2
		% within groups	6.7%	6.7%	6.7%
	Housewife	Count	0	3	3
		% within groups	0.0%	20.0%	10.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 45

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.167	3	.244

Graph 22

RESULT:

The Pearson Chi Square test is 0.520 and hence is insignificant. This insignificance is due to low sample number.

Table 46: Chief Complaints * groups

Crosstab

			groups		Total
			Cases	Controls	
Cheif complaints	Age related weakness	Count	5	10	15
		% within groups	33.3%	66.7%	50.0%
	Weakness and pain	Count	10	5	15
		% within groups	66.7%	33.3%	50.0%
Total		Count	15	15	30
		% within groups	100.0 %	100.0%	100.0 %

Table 47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)

Pearson Chi-Square	3.333	1	.068	
Fisher's Exact Test				.143

Graph 23

RESULT:

The Fisher's Exact test is 0.143 which is insignificant. This insignificance is due to low sample number.

Table 48: Complaint history * groups

Crosstab

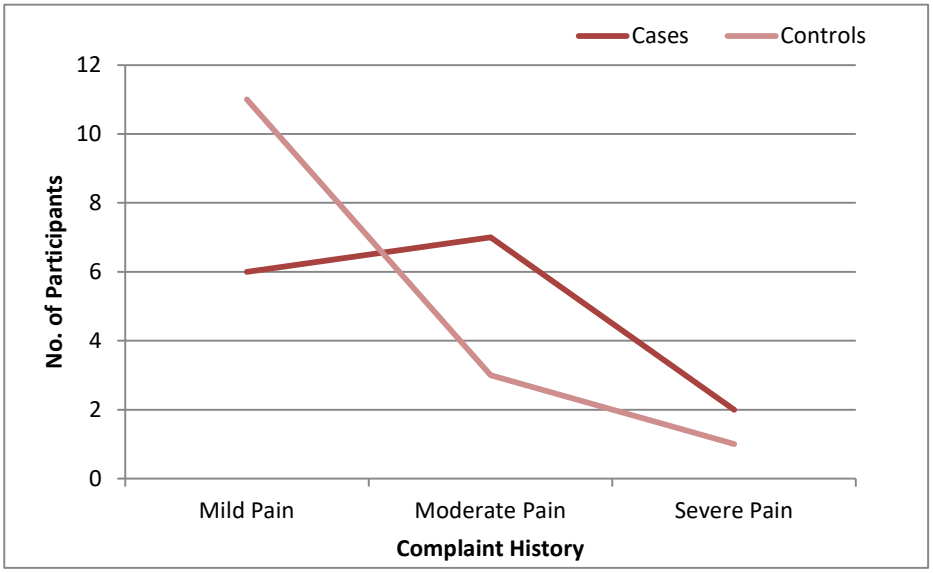
			Groups		Total
			Cases	Controls	
Complaint history	Mild pain	Count	6	11	17
		% within groups	40.0%	73.3%	56.7%
	Moderate pain	Count	7	3	10
		% within groups	46.7%	20.0%	33.3%
	Severe pain	Count	2	1	3
		% within groups	13.3%	6.7%	10.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 49

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.404	2	.182

Graph 24



RESULT:

The Pearson Chi Square test is 0.182 which is insignificant. The insignificance is due to low sample number and Covid situations.

Table 50: Past history * groups

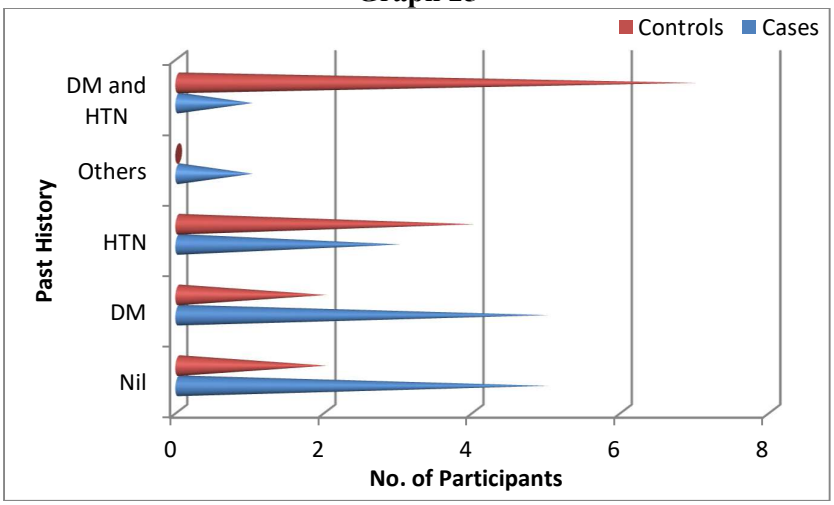
Crosstab

			Groups		Total
			Cases	Controls	
Past history	Nil	Count	5	2	7
		% within groups	33.3%	13.3%	23.3%
	DM	Count	5	2	7
		% within groups	33.3%	13.3%	23.3%
	HTN	Count	3	4	7
		% within groups	20.0%	26.7%	23.3%
	Others	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	DM and HTN	Count	1	7	8
		% within groups	6.7%	46.7%	26.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 51
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.214	4	.084

Graph 25



RESULT:

The Pearson Chi Square test is 0.084 which is insignificant. This is due to low sample number.

Table 52: Treatment history * groups

Crosstab

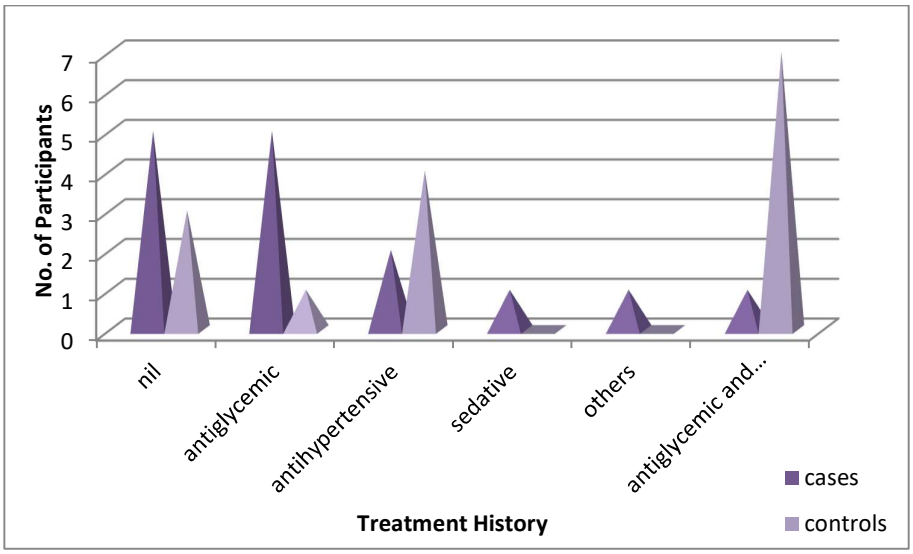
			groups		Total
			Cases	Controls	
Treatment_history	Nil	Count	5	3	8
		% within groups	33.3%	20.0%	26.7%
	Antiglycemic	Count	5	1	6
		% within groups	33.3%	6.7%	20.0%
	Anti-hypertensive	Count	2	4	6
		% within groups	13.3%	26.7%	20.0%
	Sedatives	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Others	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Antiglycemic and Antihypertensive	Count	1	7	8
		% within groups	6.7%	46.7%	26.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 53

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.333	5	.066

Graph 26



RESULT:

The Pearson Chi Square test is 0.066 which is insignificant. This is due to low sample number.

Table 54: Family history * groups

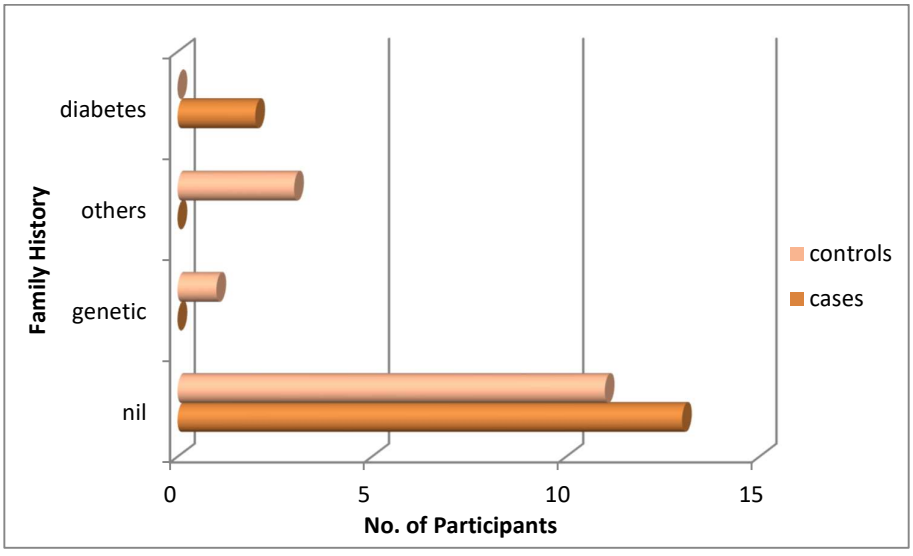
Crosstab

			groups		Total
			Cases	Controls	
Family history	Nil	Count	13	11	24
		% within groups	86.7%	73.3%	80.0%
	Genetic	Count	0	1	1
		% within groups	0.0%	6.7%	3.3%
	Others	Count	0	3	3
		% within groups	0.0%	20.0%	10.0%
	Diabetes	Count	2	0	2
		% within groups	13.3%	0.0%	6.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 55
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.167	3	.104

Graph 27



RESULT:

The Pearson Chi Square Test is 0.104 which is insignificant. This is due to the low sample number.

Table 56: Diet * groups

Crosstab

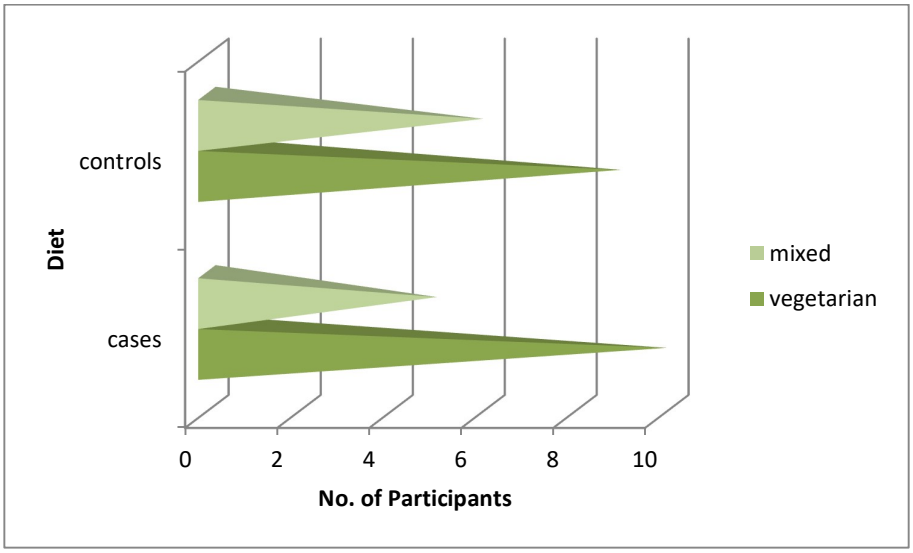
			groups		Total
			Cases	Controls	
Diet	Vegetarian	Count	10	9	19
		% within groups	66.7%	60.0%	63.3%
	Mixed	Count	5	6	11
		% within groups	33.3%	40.0%	36.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table: 57

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.144	1	.705	
Fisher's Exact Test				1.000

Graph 28



RESULT:

The Fisher's extract test is 1.000 which is insignificant. This is due to low sample number.

Table 58: Sleep * groups

Crosstab

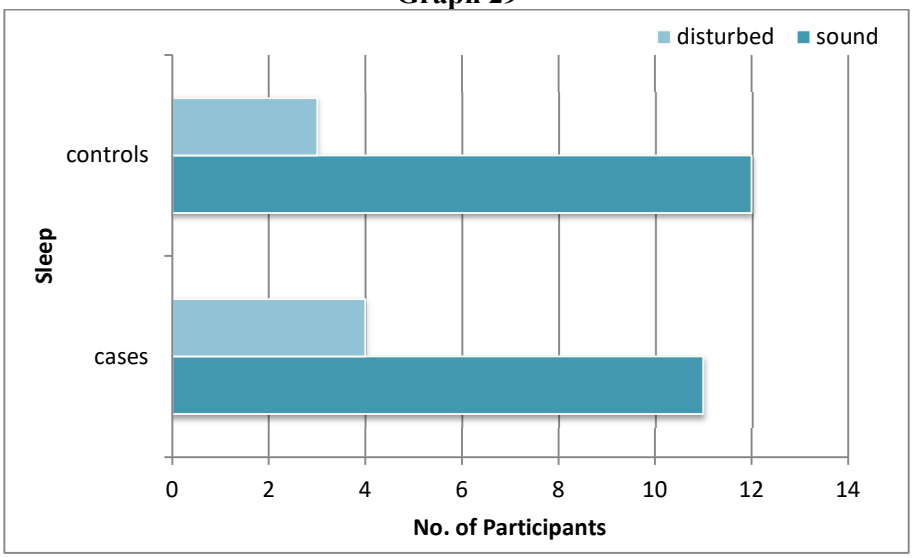
			groups		Total
			Cases	Controls	
sleep	Sound	Count	11	12	23
		% within groups	73.3%	80.0%	76.7%
	Distrubed	Count	4	3	7
		% within groups	26.7%	20.0%	23.3%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 59

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.186	1	.666	
Fisher's Exact Test				1.000

Graph 29



RESULT:

The Fisher's Extract test is 1.000 which is insignificant. This is due to low sample number and Covid situations.

Table 60: Addiction * groups

Crosstab

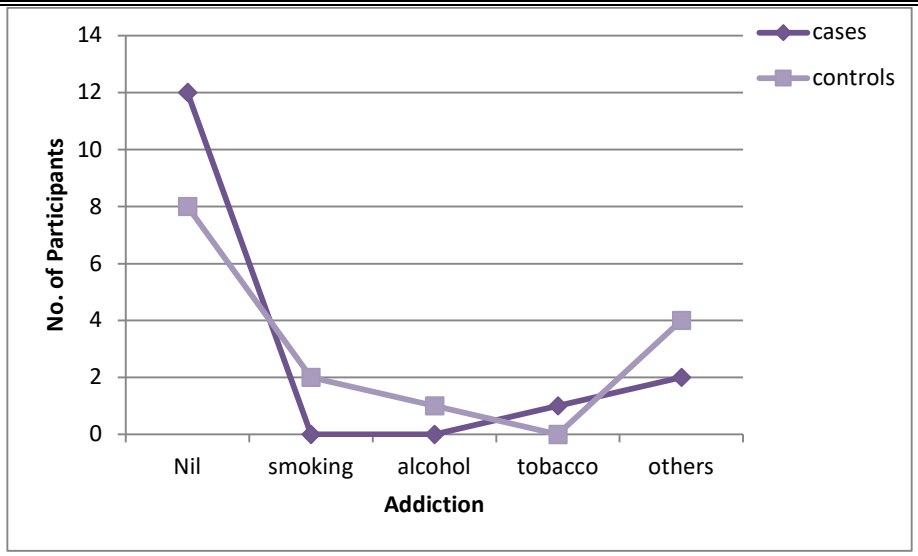
			groups		Total
			Cases	Controls	
addiction	Nil	Count	12	8	20
		% within groups	80.0%	53.3%	66.7%
	Smoking	Count	0	2	2
		% within groups	0.0%	13.3%	6.7%
	Alcohol	Count	0	1	1
		% within groups	0.0%	6.7%	3.3%
	Tobacco	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Others	Count	2	4	6
		% within groups	13.3%	26.7%	20.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 61

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.467	4	.243

Graph 30



RESULTS:

The Pearson Chi Square test is 0.243 which is insignificant due to low sample number.

Table 62 Habit * groups

Crosstab

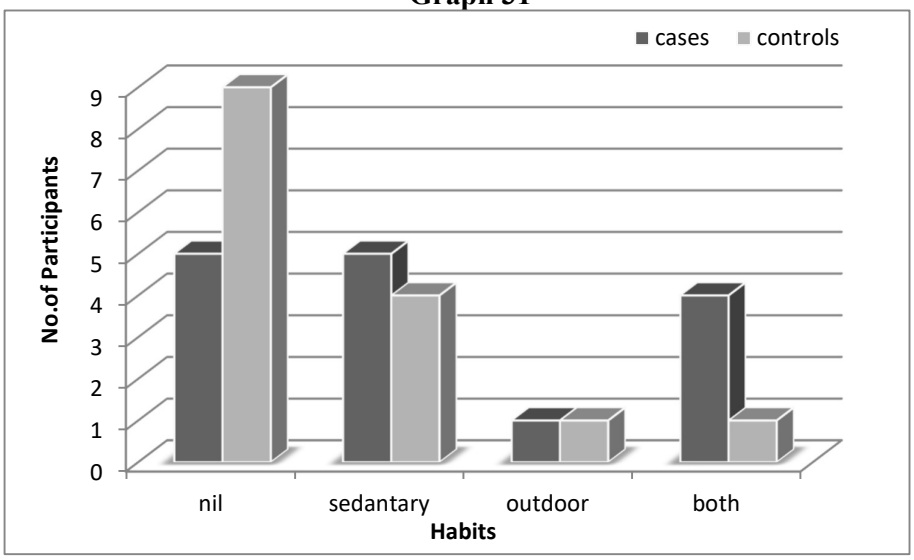
			groups		Total
			Cases	Controls	
habit	Nil	Count	5	9	14
		% within groups	33.3%	60.0%	46.7%
	Sedentary	Count	5	4	9
		% within groups	33.3%	26.7%	30.0%
	Outdoor	Count	1	1	2
		% within groups	6.7%	6.7%	6.7%
	Both	Count	4	1	5
		% within groups	26.7%	6.7%	16.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 63

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.054	3	.383

Graph 31



RESULT:

The Pearson Chi Square test is 0.343 which is insignificant due to low sample number and Covid restrictions.

Table 64: General Linear Model

Descriptive Statistics

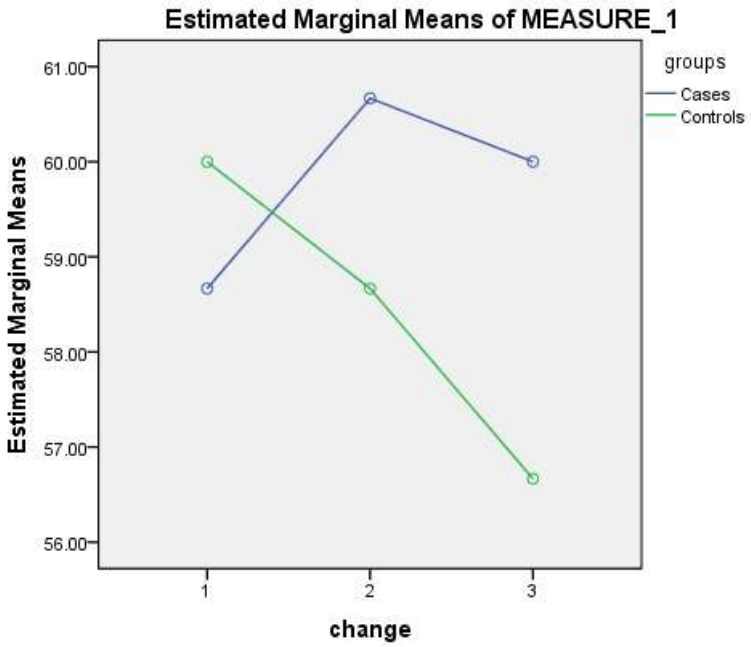
	groups	Mean	Std. Deviation	N
Pre-test Overall QoL	Cases	58.6667	10.60099	15
	Controls	60.0000	11.33893	15
	Total	59.3333	10.80655	30
Post-test Overall	Cases	60.6667	9.61150	15
	Controls	58.6667	11.25463	15
	Total	59.6667	10.33352	30
Follow-up Overall QoL	Cases	60.0000	9.25820	15
	Controls	56.6667	6.17213	15
	Total	58.3333	7.91478	30

Table 65: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
change	Sphericity Assumed	28.889	2	14.444	.462	.632
change * groups	Sphericity Assumed	86.667	2	43.333	1.386	.259
Error(change)	Sphericity Assumed	1751.111	56	31.270		

Graph 32



RESULT:

The overall results for all domains are different for both groups. The case group shows a marked improvement in a upward way upto a certain extent and after that it slightly decreases, still the overall QOL scale is increased significantly and the intervention for case group is giving a positive result. But for the control group the result gives negative phenomena which says that the QOL scale reduces continuously in a steady pace and justifies the effect of intervention of the case group.

The Pearson Chi Square test for change between groups for Overall QOL is 0.632 and that for change within groups is 0.259. The scores of the QOL between the groups are not significant and the same within the group is also non- significant

Table 66: General Linear Model

Descriptive Statistics

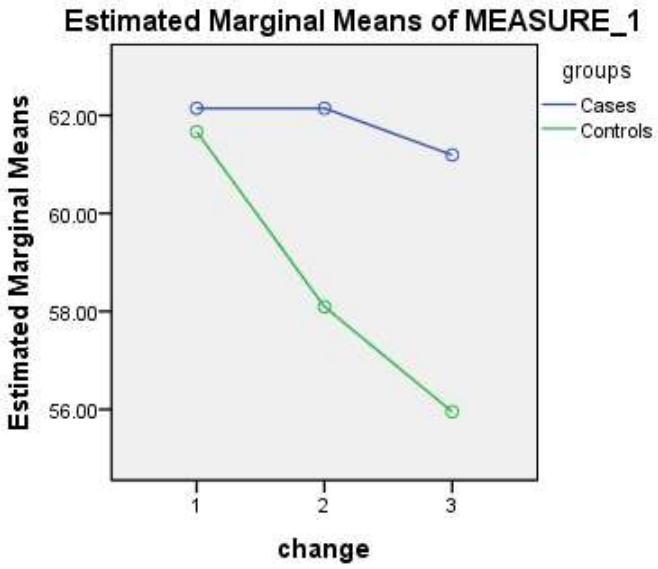
	groups	Mean	Std. Deviation	N
Pre-test domain 1	Cases	62.1429	9.90111	15
	Controls	61.6667	11.95737	15
	Total	61.9048	10.78928	30
Post-test domain1	Cases	62.1429	9.52594	15
	Controls	58.0952	8.37212	15
	Total	60.1190	9.04886	30
Followup domain1	Cases	61.1905	6.86536	15
	Controls	55.9524	5.16962	15
	Total	58.5714	6.53847	30

Table 67: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	166.950	2	83.475	3.468	.038
change * groups	92.120	2	46.060	1.913	.157
Error(change)	1348.073	56	24.073		

Graph 33: Profile Plots



RESULTS:

The result of Domain 1 differs for both the groups. The result of the case group shows no significant change during the intervention while that of the control group shows gradual decline in the graph which is systematically declining in QOL scores over a period of time which says that there is a need of intervention to sustain or improve QOL scale score to the initial level even in case group it is not improved , with intervention for domain 1 but it is sustained for a certain period after that it is declined slightly that shows that there is no effect of the intervention for domain 1 in senior citizen but the intervention may be effective to sustain it if the intervention is given for a long period. And even there is a need to change the whole intervention based on the components of domain 1. The Pearson Chi Square test for the change between the groups is 0.038 and that of change within the groups is 0.157. The score is significant for change between the groups while it is insignificant for the change within the groups.

Table 68:General Linear Model

Descriptive Statistics

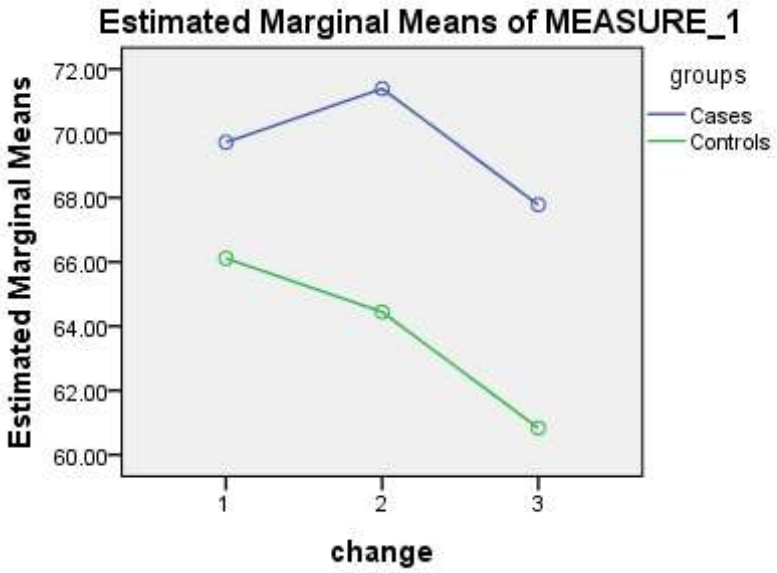
	groups	Mean	Std. Deviation	N
Pre-test domain2	Cases	69.7222	12.14441	15
	Controls	66.1111	7.85323	15
	Total	67.9167	10.21500	30
Post-test domain 2	Cases	71.3889	7.69371	15
	Controls	64.4444	8.60663	15
	Total	67.9167	8.76401	30
follow up domain 2	Cases	67.7778	7.29663	15
	Controls	60.8333	7.18243	15
	Total	64.3056	7.94221	30

Table 69: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	260.802	2	130.401	5.229	.008
change * groups	55.556	2	27.778	1.114	.335
Error(change)	1396.605	56	24.939		

Graph 34: Profile Plots



RESULTS:

The result of Domain 2 shows that there is significant improvement in the intervention group and that of the control group shows gradual and very slow decline. This shows that there is some positive effect of the intervention in the case group compared to the no intervention in the control group. The Pearson Chi square test for the change between the groups is 0.008 and that of the change within groups is 0.335. The score for the change between the group is significant while that of change within the group is insignificant.

Table 70: General Linear Model

Descriptive Statistics

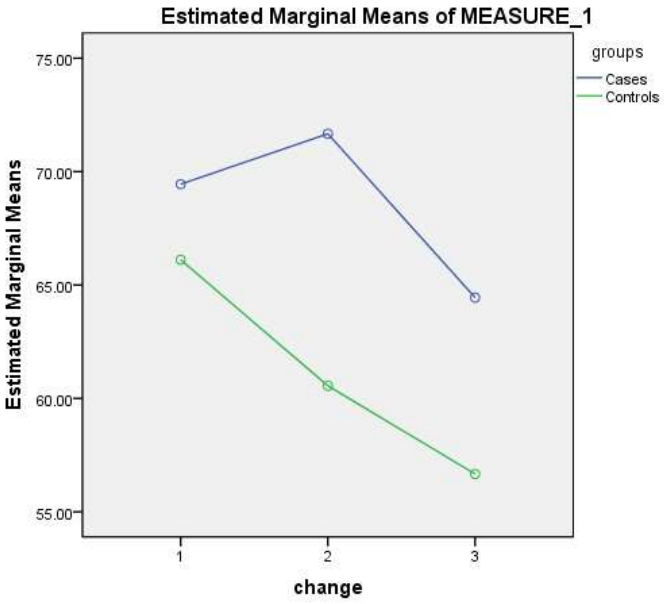
	groups	Mean	Std. Deviation	N
Pre-test domain3	Cases	69.4444	14.31874	15
	Controls	66.1111	20.76576	15
	Total	67.7778	17.60754	30
Post-test domain3	Cases	71.6667	10.35098	15
	Controls	60.5556	17.38530	15
	Total	66.1111	15.15143	30
Followup domain3	Cases	64.4444	11.12103	15
	Controls	56.6667	17.59329	15
	Total	60.5556	14.99255	30

Table 71: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	858.025	2	429.012	7.154	.002
change * groups	228.395	2	114.198	1.904	.158
Error(change)	3358.025	56	59.965		

Graph 35:Profile Plots



RESULTS:

The result of Domain 3 shows that there is significant improvement in the intervention group and that of the control group shows gradual and continuous decline. This shows that there is some positive effect of the intervention in the case group compared to the no intervention in the control group. The Pearson Chi square test for the change between the groups is 0.002 and that of the change within groups is 0.158. The score for the change between the group is significant while that of change within the group is insignificant.

Table 72; General Linear Model

Descriptive Statistics

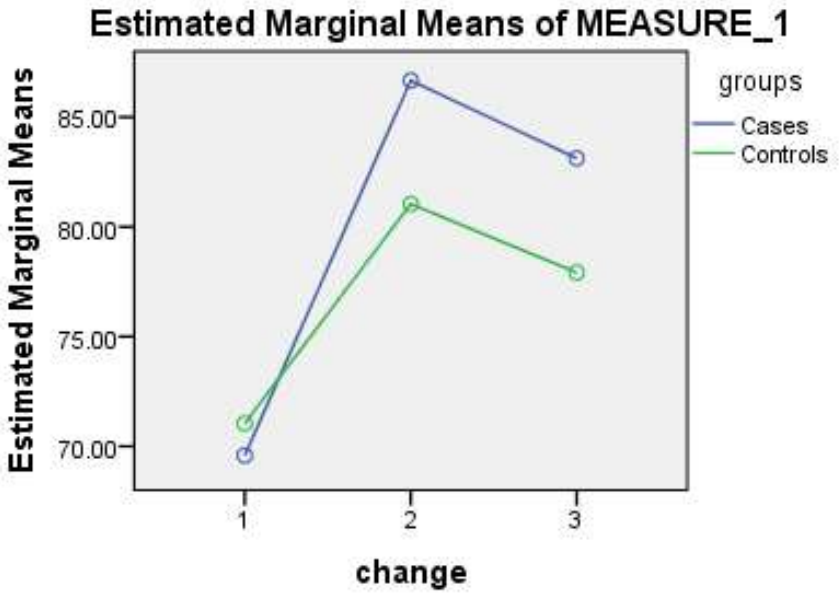
	Groups	Mean	Std. Deviation	N
Pre-test domain 4	Cases	69.5833	13.84840	15
	Controls	71.0417	9.77329	15
	Total	70.3125	11.80018	30
Post-test domain4	Cases	86.6667	10.79090	15
	Controls	81.0417	9.91500	15
	Total	83.8542	10.57619	30
Follow up domain 4	Cases	83.1250	11.25496	15
	Controls	77.9167	9.77329	15
	Total	80.5208	10.69019	30

Table 73: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	2986.979	2	1493.490	58.983	.000
change * groups	236.979	2	118.490	4.680	.013
Error(change)	1417.969	56	25.321		

Graph 36: Profile Plots



RESULTS:

The result of Domain 4 shows that there is significant improvement in the intervention group and the control group. The exponential rise in the case group is higher compared to the control group. This shows that there is more positive effect of the intervention in the case group compared to the no intervention in the control group. The Pearson Chi square test for the change between the groups is 0.000 and that of the change within groups is 0.013. The score for the change between the group is significant while that of change within the group is also significant.

7. DISCUSSIONS

Discussion on Old Age:

According to the literary review, ageing is a normal physiological phenomena taking place in all our lives. It is inevitable process and cannot be treated by any medications. Ageing is not a disease but rather a natural process on has to go through in a lifespan. Ageing can only be prevented for some period of time; but not cured completely- which is against laws of nature. One can prolong his or her life by complying with laws of nature, that is, by following healthy routines like healthy diet, exercise and yoga.

Discussion on yoga Therapy for Old Age:

According to the literature review, Yoga therapy is the application of Yogic principles to a particular person with the objective of achieving a particular spiritual, psychological, or physiological goal. Old age is a period in life where one has completed his or her professional life and has settled for retirement. People usually incline on Bhajans and Bhakthi and dhyana to dedicate the rest of their time to god. Some may even adapt doing good deeds or charity work. Old age is also associated with lot of physical, physiological and psychological complaints which need to be reduced. This is possible through yoga therapy which has in itself an intertwined methodology of overcoming illness or vyadi at all levels. Physical and physiological ailments can be alleviated through asanas, pranayama and kriyas, while that of the mental afflictions by pranayama and dhyana. One can also go for Bhakthi and Bhajans to sublimate their emotions.

An overall elevation of the being is possible through yoga.

Discussion on Asana:

The asanas are a part of yoga therapy. According to the review, there are many asanas defined by various textbooks and authors. The asanas selected for the therapy in this study focuses on elevation of quality of life as a whole, and all systems in general. It mainly gives relaxation to the overall body, relieving stress and strain accumulated in a day. It also exercises the whole systems, massages the organs and stretches the muscle groups, relieves constipation, backpain and helps in strengthening the mind.

Discussion on Pranayama:

Pranayama is simple yet intricate technique which has its effect on the entire nadis of the body. It regulates the flow of prana throughout the body and thus balances it. The pranayam techniques used in the intervention also helps lessen the oxidative stress and helps the cells assimilate more oxygen, thus reduce the damage of the cells. It also increases the lung capacity as explained in the literature review and on a subtler level it increases the healing capacity of the cells.

Discussion on Dhyana:

Dhyana or Meditation is a technique where there is continuous flow of thoughts on one object or subject. It's a state of complete focus on certain object. In this study the individuals focus on internal and external awareness which is slowly brought upon by giving instructions. Soothing music can elevate one's state of focus on the object. Dhyana also brings upon the relaxation of the mental faculties.

Discussion on the sampling:

The selection of the sample is by random selection where participants who were interested in the study were made to sign the consent and then selected randomly by chit method. Each group contained 15 members and all of them participated in this study enthusiastically.

Discussion on source of data:

The subjects were selected from places in Mysuru. Subjects who tallied with the selection criteria and who gave their written consent to participate in the study were selected randomly from day care centres of kuvempunagar. Subjects who satisfied the selection criteria were screened and complete medical history was taken. Subjects from Kuvempunagar were so taken as they satisfied the inclusion criteria and a lot of subjects in their retired age were available.

Discussion on inclusion criteria:

The subjects of age group 60- 75 years were selected without any severe systemic disease. This age group was so selected as they are called the young old age group and its easier to evaluate the effects of yoga therapy. There was no preference on a single gender and any of the either sex was equally given opportunity to participate in the study. This study was conducted with due consent from the respective participant.

Discussion on exclusion criteria:

The subjects with severe systemic illness, hemiparesis, cancer and bedridden individuals were excluded. This is because it's not feasible to for them to participate in the study which includes performing asanas and vyayamas. They would need

careful supervision and personalized yoga protocol which is not possible in a mass intervention.

Discussion on Tools:

The tool used for the study here is WHOQOL- Bref which consists of 26 questions including overall quality of life and physical, psychological, social relationships and environment health domains. These domains cover all aspect of health of an elderly individual. The Bref scale is easier to employ and calculate the results.

Discussion on intervention method:

The intervention was given according to the protocol which includes preparatory practices (sukshmavyayama), asanas (standing, supine, prone and sitting), pranayama and lastly dhyana. The intervention was modified in one subject who had backpain, which reduced after few yoga classes. The duration of the intervention remained fairly constant and the subjects had no difficulty in withstanding the duration. The instructions given were also according to their level of comfort and in the language they could understand.

Table 74: Age * groups

Crosstab

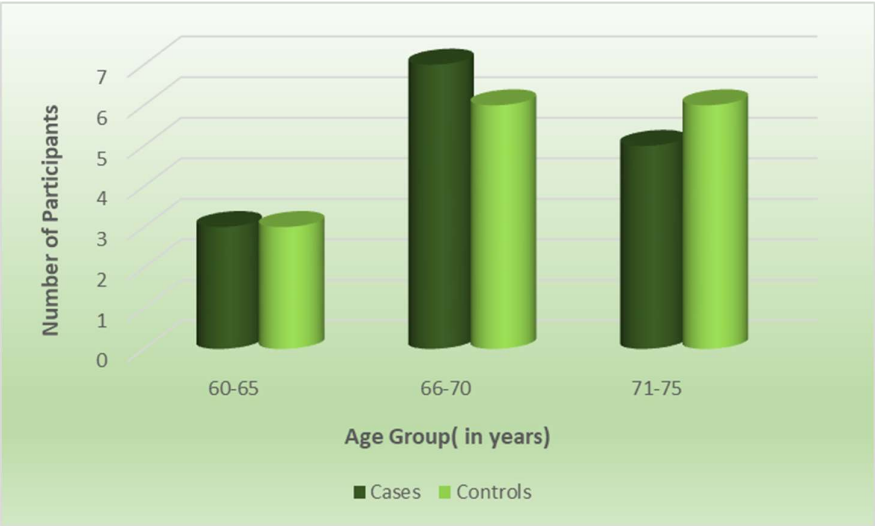
			groups		Total
			Cases	Controls	
Age	60-65	Count	3	3	6
		% within groups	20.0%	20.0%	20.0%
	66-70	Count	7	6	13
		% within groups	46.7%	40.0%	43.3%
	71-75	Count	5	6	11
		% within groups	33.3%	40.0%	36.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 75

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.168	2	.920

Graph 37



DISCUSSION:

As the intervention is given to the senior citizen, the age wise distribution is not uniform and because of that the p value shows an insignificant value, however when the whole population is taken into consideration, the intervention included the age group between 60-75 hence the range between these groups have taken for intervention. But in this study, most of the senior citizens were very active inspite of their age and wholeheartedly accepted the intervention of yoga, pranayama and dhyana and nobody felt uneasy for the intervention despite their higher age. The non-significance for the age is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 76: Sex * groups

Crosstab

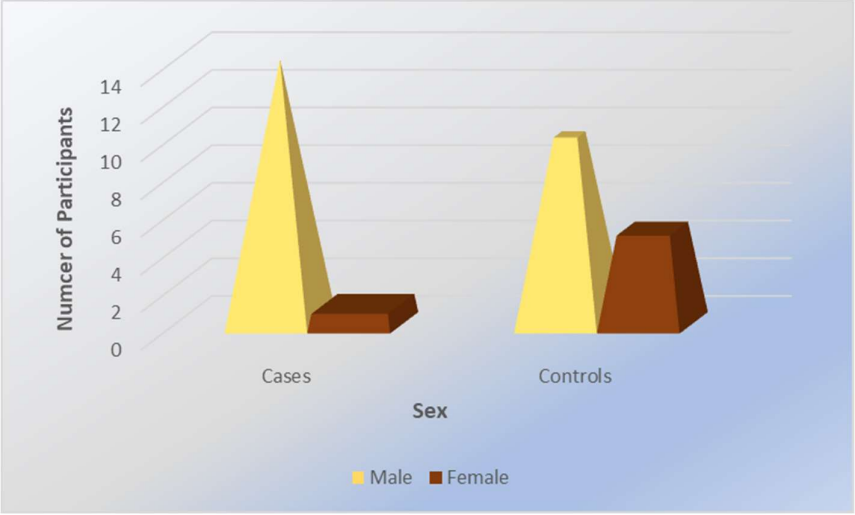
			Groups		Total
			Cases	Controls	
Sex	Male	Count	14	10	24
		% within groups	93.3%	66.7%	80.0%
	Female	Count	1	5	6
		% within groups	6.7%	33.3%	20.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 77

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	3.333	1	.068	
Fisher's Exact Test				.169

Graph 38



DISCUSSION:

In the study, we find that the sex wise distribution of the participants is not uniform and hence the p value is insignificant, however when the whole study is taken into consideration, all the genders have taken part wholeheartedly and methodically despite the difference in their sex. The non- significance for the sex is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 78: Education * groups

Crosstab

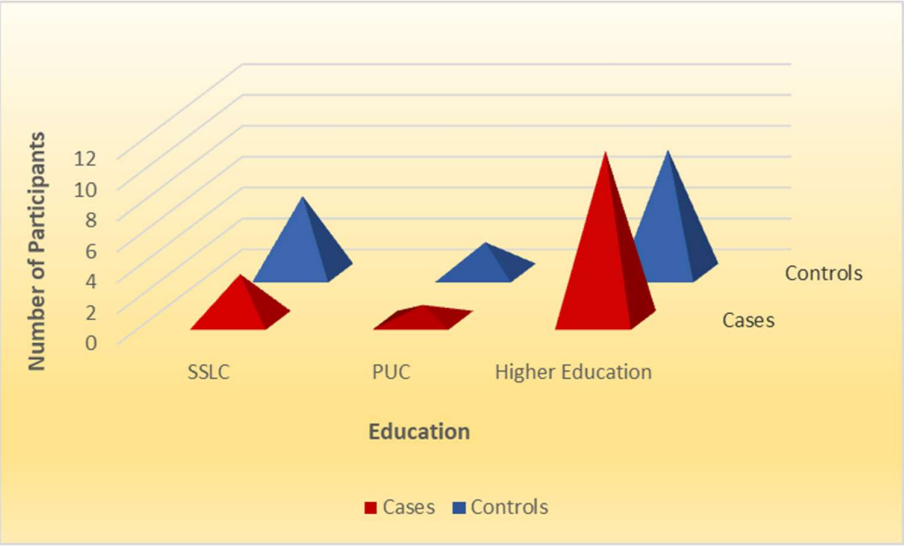
			Groups		Total
			Cases	Controls	
Education	SSLC	Count	3	5	8
		% within groups	20.0%	33.3%	26.7%
	PUC	Count	1	2	3
		% within groups	6.7%	13.3%	10.0%
	Higher Education	Count	11	8	19
		% within groups	73.3%	53.3%	63.3%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 79

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.307	2	.520

Graph 39



DISCUSSION:

According to the above study, all the participants have secured basic education, while some have completed PUC and higher educations. The distribution according to educational background is not uniform and because of that the p value shows an insignificant value. All the participants despite their education have taken part in the study intervention with equal enthusiasm. The non- significance for the education is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 80: Occupation * groups

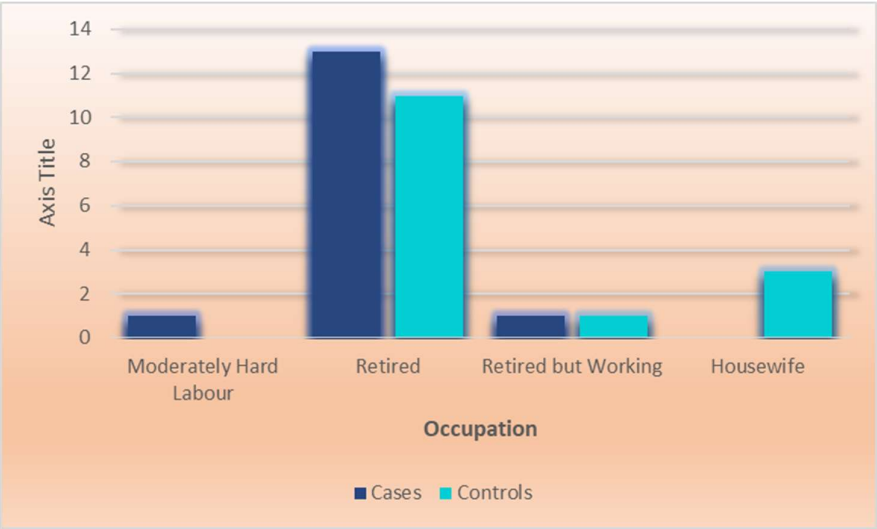
Crosstab

			Groups		Total
			Cases	Controls	
Occupation	Moderately hard labour	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Retired	Count	13	11	24
		% within groups	86.7%	73.3%	80.0%
	Retired but working	Count	1	1	2
		% within groups	6.7%	6.7%	6.7%
	Housewife	Count	0	3	3
		% within groups	0.0%	20.0%	10.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 81
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.167	3	.244

Graph 40



DISCUSSION:

By observing the above study data we find that there are participants coming of various occupational background, from housewife and retired to moderately hardworking labour.

The distribution according to occupational background is not uniform and because of that the p value shows an insignificant value. Inspite of this all have given their full attention and determination in participating in this study. The non- significance for the occupation is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 82:Cheif_complaints * groups

Crosstab

			groups		Total
			Cases	Controls	
Cheif_complaints	Age related weakness	Count	5	10	15
		% within groups	33.3%	66.7%	50.0%
	Weakness and pain	Count	10	5	15
		% within groups	66.7%	33.3%	50.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 83

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	3.333	1	.068	
Fisher's Exact Test				.143

Graph 41

DISCUSSION:

According to the data, the chief complaint of the aged participants is either age related weakness or weakness and pain which are mainly the geriatric problems faced by the elderly today. To alleviate these the study intervention is designed and implemented to which the case group responded positively. The distribution according to chief complaint is not uniform and because of that the p value shows an insignificant value. The non- significance for the chief complaints is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 84: Complaint history * groups

Crosstab

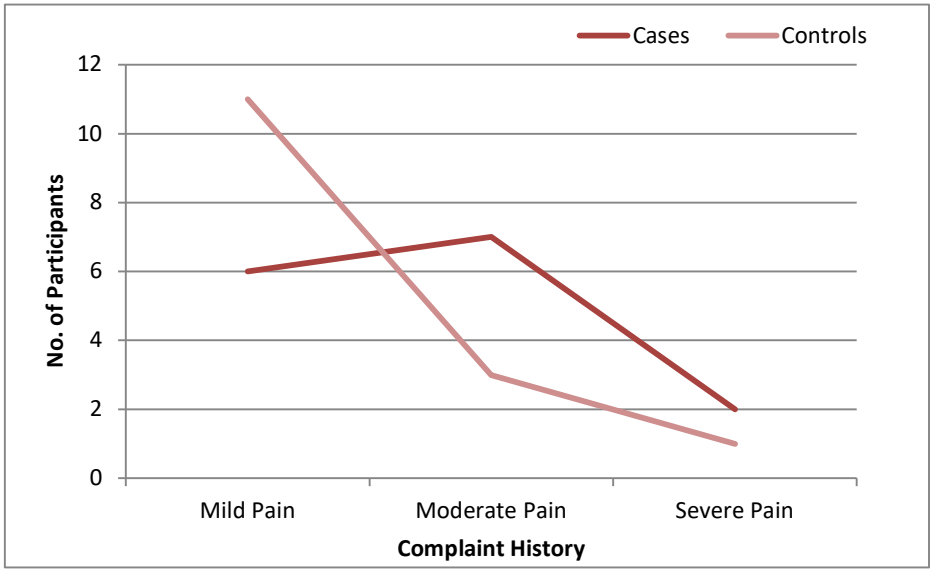
			Groups		Total
			Cases	Controls	
Complaint_history	Mild pain	Count	6	11	17
		% within groups	40.0%	73.3%	56.7%
	Moderate pain	Count	7	3	10
		% within groups	46.7%	20.0%	33.3%
	Severe pain	Count	2	1	3
		% within groups	13.3%	6.7%	10.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 85

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.404	2	.182

Graph 42



DISCUSSION:

As the study is done, we find that most participants complain mild or moderate pain and few have severe pain. To decrease the pain, the intervention was given which produced the positive result clinically for participants of all ages. The distribution according to complaint history is not uniform and because of that the p value shows an insignificant value. The unequal distribution of this is due to the small sample size and due to this, there is non-significance of the complaint history and it is not at all important here.

Table 86: Past history * groups

Crosstab

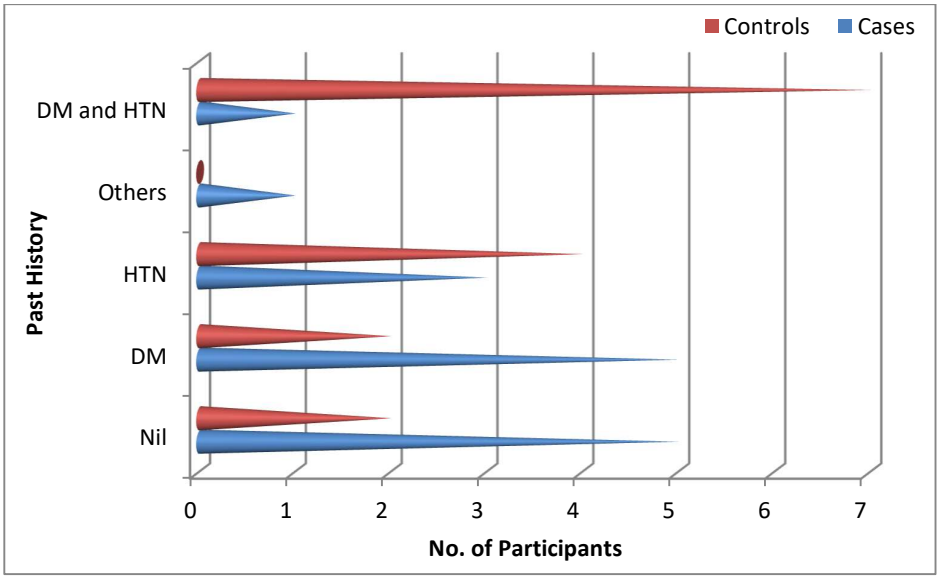
			Groups		Total
			Cases	Controls	
Past_history	Nil	Count	5	2	7
		% within groups	33.3%	13.3%	23.3%
	DM	Count	5	2	7
		% within groups	33.3%	13.3%	23.3%
	HTN	Count	3	4	7
		% within groups	20.0%	26.7%	23.3%
	Others	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	DM and HTN	Count	1	7	8
		% within groups	6.7%	46.7%	26.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 87

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.214	4	.084

Graph 43



DISCUSSION:

According to the data mentioned above, some participants have the age related metabolic diseases, diabetes mellitus and hypertension in particular, while few have no such history. As one ages the metabolic diseases are quite commonly seen. And inspite of these diseases, the elderly participants of the study have actively participated and those in the intervention group have tried their best to alleviate their diseases. The distribution of past history is not uniform and because of that the p value shows an insignificant value. The non- significance for the past history is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 88: Treatment history * groups

Crosstab

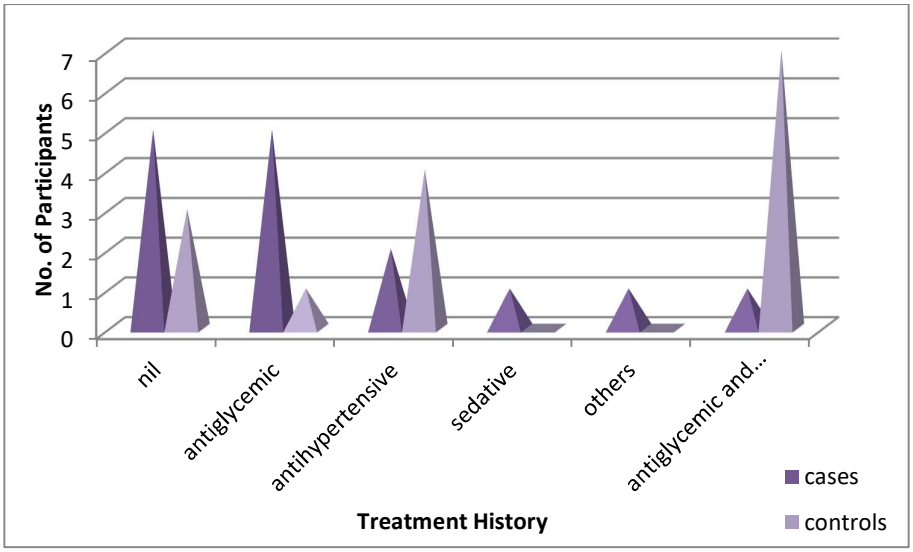
			groups		Total
			Cases	Controls	
Treatment history	Nil	Count	5	3	8
		% within groups	33.3%	20.0%	26.7%
	Antiglycemic	Count	5	1	6
		% within groups	33.3%	6.7%	20.0%
	Anti-hypertensive	Count	2	4	6
		% within groups	13.3%	26.7%	20.0%
	Sedatives	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Others	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Antiglycemic and Antihypertensive	Count	1	7	8
		% within groups	6.7%	46.7%	26.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 89

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.333	5	.066

Graph 44



DISCUSSION:

As mentioned in the data above, participants who have a history of metabolic diseases take the specific medicines for those diseases and very few of them don't take any tablets. In both the case and control groups we find that there are participants who take medical assistance for their diseases. The participants of intervention group have shown determination while practicing yoga. The distribution of treatment history is not uniform and because of that the p value shows an insignificant value. The non-significance for the treatment history is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 90: Family history * groups

Crosstab

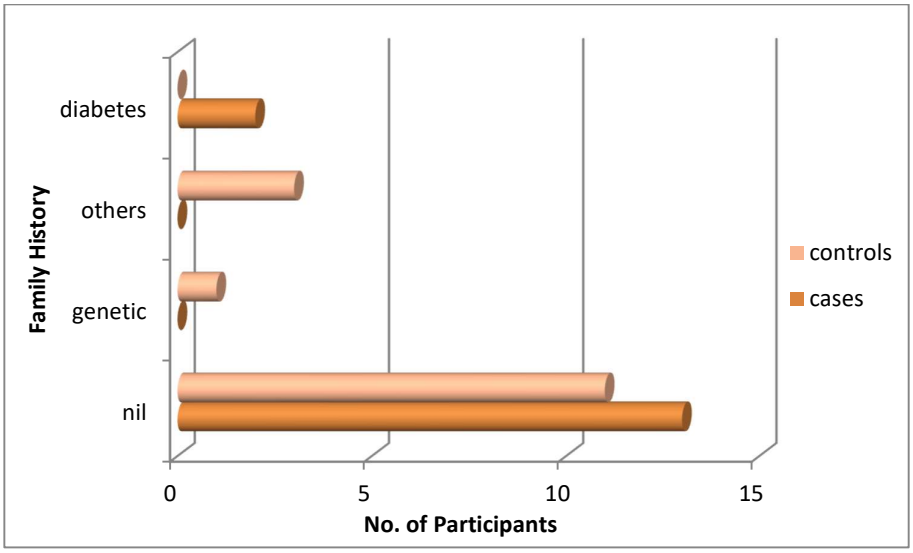
			groups		Total
			Cases	Controls	
Family_history	Nil	Count	13	11	24
		% within groups	86.7%	73.3%	80.0%
	Genetic	Count	0	1	1
		% within groups	0.0%	6.7%	3.3%
	Others	Count	0	3	3
		% within groups	0.0%	20.0%	10.0%
	Diabetes	Count	2	0	2
		% within groups	13.3%	0.0%	6.7%
qTotal		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 91

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.167	3	.104

Graph 45



DISCUSSION:

The results of the data demonstrate that most of the participants have no family history and only very few have a genetic predisposition of metabolic diseases. This suggests that most of them might have contracted the metabolic diseases due to their lifestyle and this doesn't have any hereditary causes. The distribution of family history is not uniform and because of that the p value shows an insignificant value. The non- significance for the treatment history is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 92: Diet * groups

Crosstab

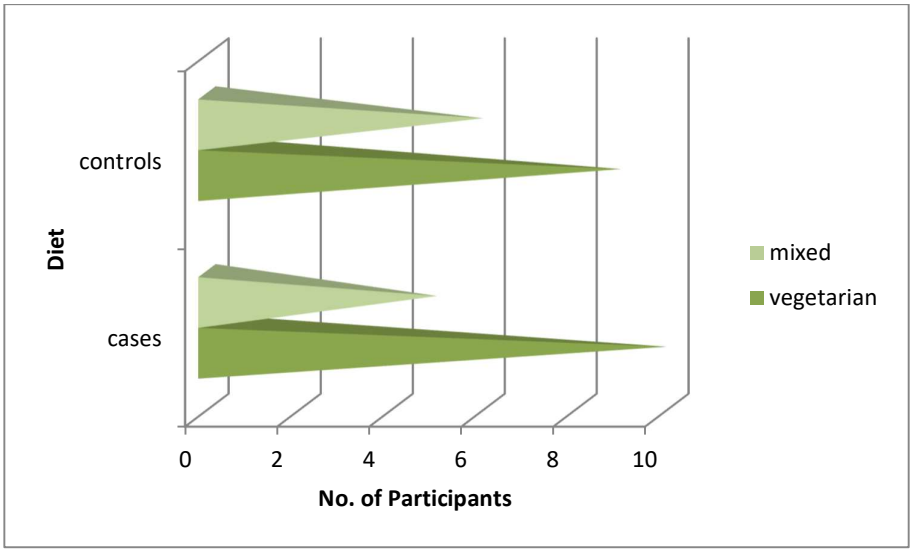
			groups		Total
			Cases	Controls	
Diet	Vegetarian	Count	10	9	19
		% within groups	66.7%	60.0%	63.3%
	Mixed	Count	5	6	11
		% within groups	33.3%	40.0%	36.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 93

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.144	1	.705	
Fisher's Exact Test				1.000

Graph 46



DISCUSSION:

As indicated in the data above, we can observe that most participants are vegetarians while some have mixed diet pattern. The diet wise distribution is not uniform and due to this there is insignificance in the p value. The non- significance for the diet pattern is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 94: Sleep * groups

Crosstab

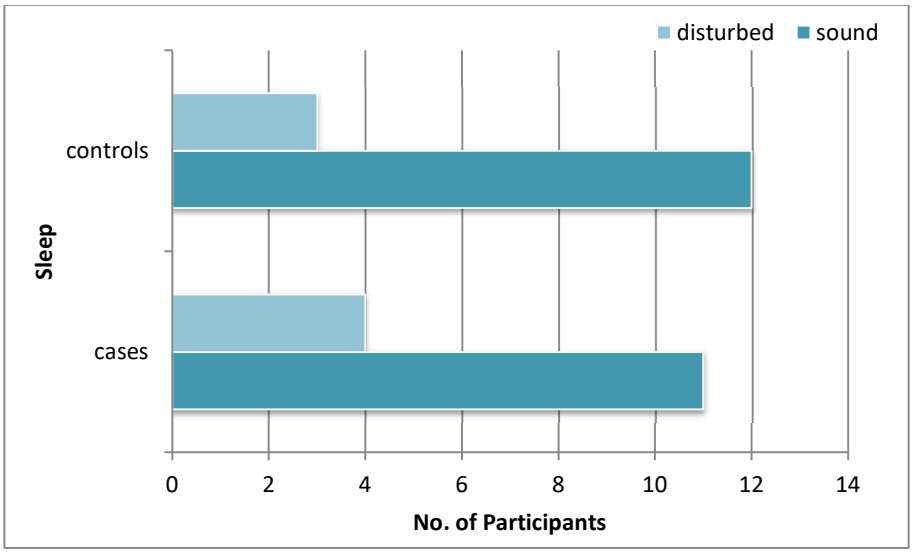
			groups		Total
			Cases	Controls	
sleep	Sound	Count	11	12	23
		% within groups	73.3%	80.0%	76.7%
	Distrubed	Count	4	3	7
		% within groups	26.7%	20.0%	23.3%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 95

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.186	1	.666	
Fisher's Exact Test				1.000

Graph 47



DISCUSSION:

The results of the data demonstrate that most of the participants sound sleep pattern and only very few have a disturbed sleep. This suggests that most of them have a good mindset and less worry. The distribution of sleep pattern is not uniform and because of that the p value shows an insignificant value. The non- significance for the sleep pattern is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 96: Addiction * groups

Crosstab

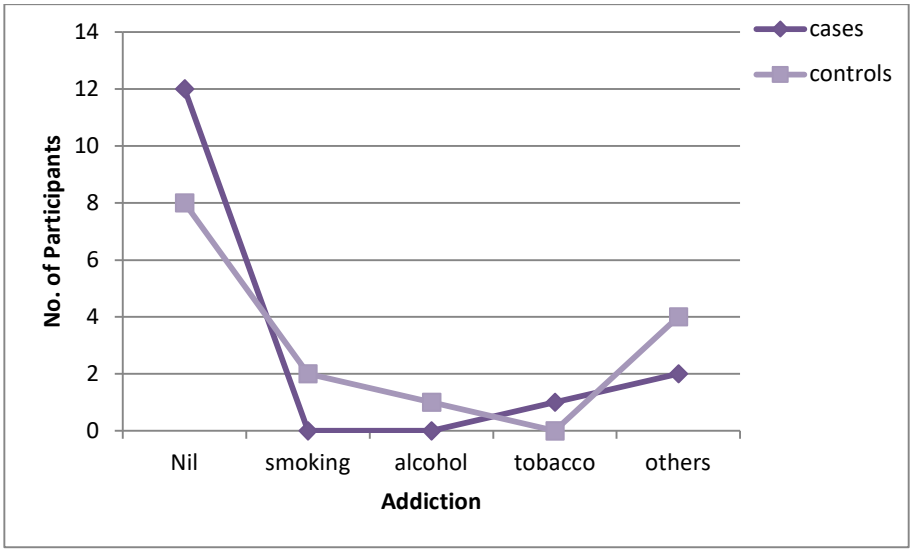
			groups		Total
			Cases	Controls	
addiction	Nil	Count	12	8	20
		% within groups	80.0%	53.3%	66.7%
	Smoking	Count	0	2	2
		% within groups	0.0%	13.3%	6.7%
	Alcohol	Count	0	1	1
		% within groups	0.0%	6.7%	3.3%
	Tobacco	Count	1	0	1
		% within groups	6.7%	0.0%	3.3%
	Others	Count	2	4	6
		% within groups	13.3%	26.7%	20.0%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 97

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.467	4	.243

Graph 48



DISCUSSION:

As indicated in the data above, we can observe that most participants are non-addictive while some have alcohol, tobacco and other addictions. The distribution is not uniform and due to this there is insignificance in the p value. The non-significance for the addiction data is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 98:Habit * groups

Crosstab

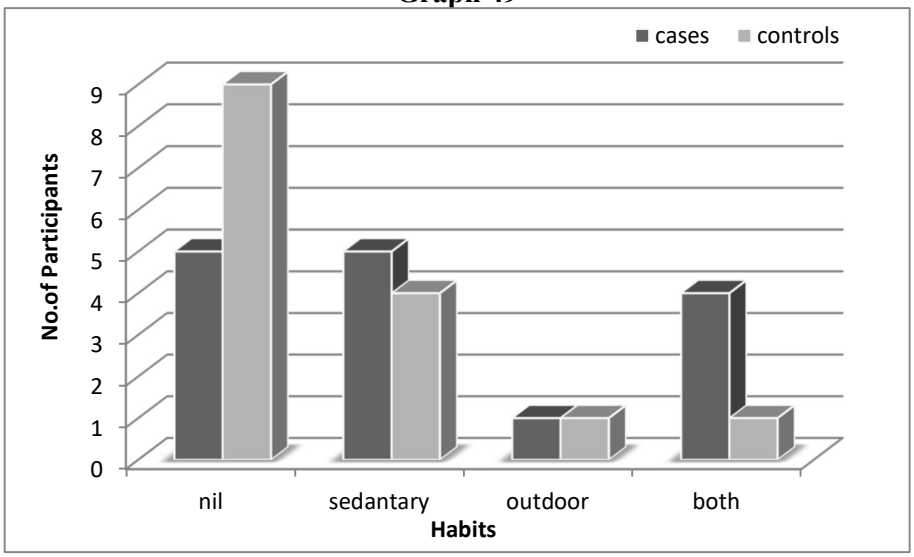
			groups		Total
			Cases	Controls	
habit	Nil	Count	5	9	14
		% within groups	33.3%	60.0%	46.7%
	Sedentary	Count	5	4	9
		% within groups	33.3%	26.7%	30.0%
	Outdoor	Count	1	1	2
		% within groups	6.7%	6.7%	6.7%
	Both	Count	4	1	5
		% within groups	26.7%	6.7%	16.7%
Total		Count	15	15	30
		% within groups	100.0%	100.0%	100.0%

Table 99

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.054	3	.383

Graph 49



DISCUSSION:

As mentioned in the data above, participants who don't have any habits are more in number than those who have some habits. In both the case and control groups we find that there are participants who more of sedentary habits than outdoor while some have both . The participants of intervention group have shown determination while practicing yoga. The distribution of habits pattern is not uniform and because of that the p value shows an insignificant value. The non- significance for this is observed because of small sample group and it is not at all important here when the study is assessed based on QOL scale.

Table 100: General Linear Model

Descriptive Statistics

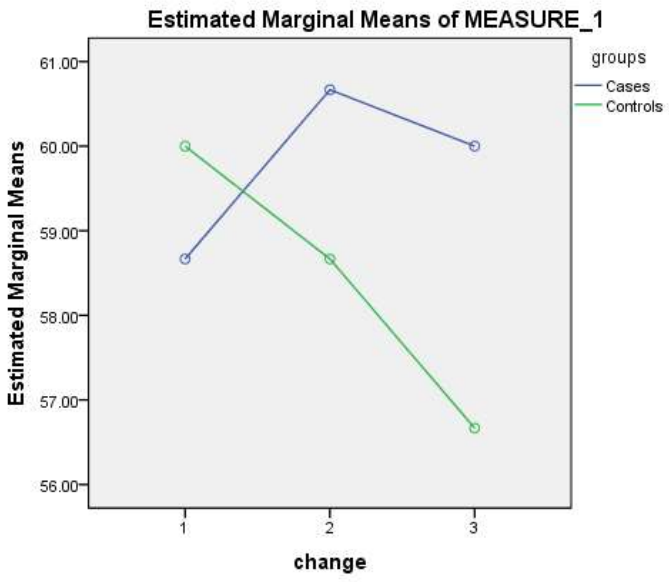
	groups	Mean	Std. Deviation	N
Pre-test Overall QoL	Cases	58.6667	10.60099	15
	Controls	60.0000	11.33893	15
	Total	59.3333	10.80655	30
Post-test Overall	Cases	60.6667	9.61150	15
	Controls	58.6667	11.25463	15
	Total	59.6667	10.33352	30
Follow-up Overall QoL	Cases	60.0000	9.25820	15
	Controls	56.6667	6.17213	15
	Total	58.3333	7.91478	30

Table 101: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
change	Sphericity Assumed	28.889	2	14.444	.462	.632
change * groups	Sphericity Assumed	86.667	2	43.333	1.386	.259
Error(change)	Sphericity Assumed	1751.111	56	31.270		

Graph 50



DISCUSSION:

The Overall assessment of QOL for the case group shows a significant improvement statistically and clinically and the graph also shows an exponential rise upto a certain extent and after that it slightly reduces to negative territory which means that there is

a notable improvement for the intervention group but it is not sustainable. To make it sustainable the intervention should be continued for a long time or to get a sustainable improvement at the peak point the intervention should be done as a part of lifestyle permanently. Hence, the results is indicating that the intervention should be a part and parcel of one's lifestyle especially for the senior citizen and it should be adapted a routine intervention permanently as apart of lifestyle modification. To justify this statement the reverse of results happened to control group where a continuous drop in QOL points observed in the subjects in the same time.

Table 102: General Linear Model

Descriptive Statistics

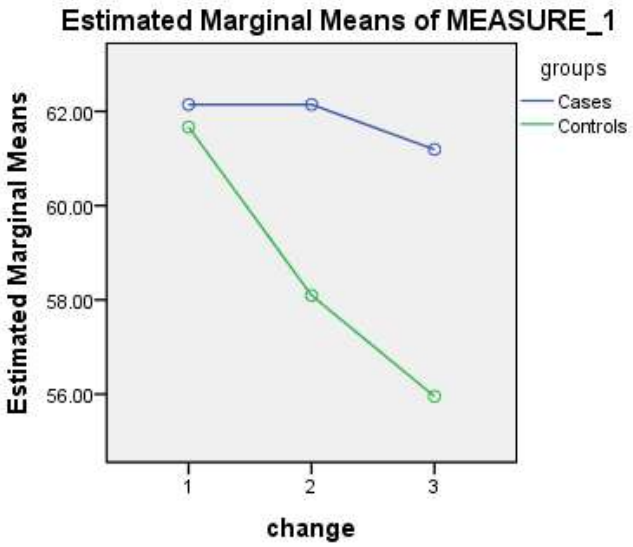
	groups	Mean	Std. Deviation	N
Pre-test domain 1	Cases	62.1429	9.90111	15
	Controls	61.6667	11.95737	15
	Total	61.9048	10.78928	30
Post-test domain1	Cases	62.1429	9.52594	15
	Controls	58.0952	8.37212	15
	Total	60.1190	9.04886	30
Follow up domain1	Cases	61.1905	6.86536	15
	Controls	55.9524	5.16962	15
	Total	58.5714	6.53847	30

Table 103: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Change	166.950	2	83.475	3.468	.038
change * groups	92.120	2	46.060	1.913	.157
Error(change)	1348.073	56	24.073		

Graph 51: Profile Plots



DISCUSSION:

The Domain 1 of QOL for the case group does not show a significant improvement statistically and the graph also shows a plateau upto a certain extent and after that it slightly reduces to negative territory which means that there is no notable improvement for the intervention group and is sustainable only to certain level. To make it sustainable the intervention should be continued for a long time or to get a

sustainable improvement at the peak point the intervention should be done as a part of lifestyle permanently and higher intervention methods is also needed. Hence, the results is indicating that the intervention should be a part and parcel of one's lifestyle especially for the senior citizen and it should be adapted a routine intervention permanently as a part of lifestyle modification. To justify this statement the reverse of results happened to control group where a continuous drop in QOL points observed in the subjects in the same time.

Table 104: General Linear Model

Descriptive Statistics

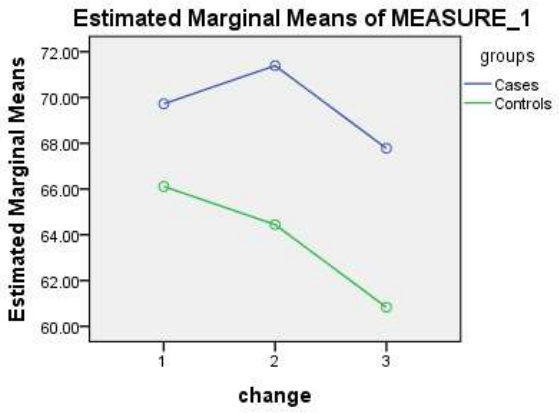
	groups	Mean	Std. Deviation	N
Pre-test domain2	Cases	69.7222	12.14441	15
	Controls	66.1111	7.85323	15
	Total	67.9167	10.21500	30
Post-test domain 2	Cases	71.3889	7.69371	15
	Controls	64.4444	8.60663	15
	Total	67.9167	8.76401	30
follow up domain 2	Cases	67.7778	7.29663	15
	Controls	60.8333	7.18243	15
	Total	64.3056	7.94221	30

Table 105: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Change	260.802	2	130.401	5.229	.008
change * groups	55.556	2	27.778	1.114	.335
Error(change)	1396.605	56	24.939		

Graph 52: Profile Plots



DISCUSSION:

The Domain 2 of QOL for the case group shows a significant improvement statistically and clinically the graph also shows a rise upto a certain extent and after that it slightly reduces to negative territory which means that there is a notable improvement for the intervention group but is not sustainable. To make it sustainable the intervention should be continued for a long time or to get a sustainable improvement at the peak point the intervention should be done as a part of lifestyle permanently. Hence, the results is indicating that the intervention should be adapted in

one's lifestyle especially for the senior citizen and it should be adapted a routine intervention permanently as a part of lifestyle modification. To justify this statement the reverse of results happened to control group where a continuous drop in QOL points observed in the subjects in the same time.

Table 106; General Linear Model

Descriptive Statistics

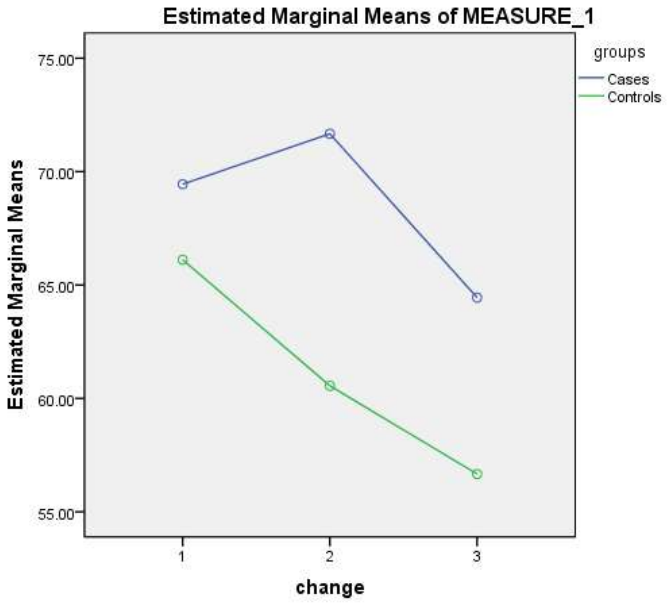
	groups	Mean	Std. Deviation	N
Pre-test domain3	Cases	69.4444	14.31874	15
	Controls	66.1111	20.76576	15
	Total	67.7778	17.60754	30
Post-test domain3	Cases	71.6667	10.35098	15
	Controls	60.5556	17.38530	15
	Total	66.1111	15.15143	30
Followup domain3	Cases	64.4444	11.12103	15
	Controls	56.6667	17.59329	15
	Total	60.5556	14.99255	30

Table 107: Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	858.025	2	429.012	7.154	.002
change * groups	228.395	2	114.198	1.904	.158
Error(change)	3358.025	56	59.965		

Graph 53: Profile Plots



DISCUSSION:

The Domain 3 of QOL for the case group shows a significant improvement statistically and clinically the graph also shows a rise upto a certain extent and after that it reduces to negative territory which means that there is a notable improvement for the intervention group but is not sustainable. To make it sustainable the intervention should be continued for a long time or to get a sustainable improvement at the peak point the intervention should be adopted as a part of lifestyle permanently. Hence, the results is indicating that the intervention should be adapted in one's lifestyle especially for the senior citizen. To justify this statement the reverse of results happened to control group where a continuous drop in QOL points observed in the subjects in the same time.

Table 108: General Linear Model

Descriptive Statistics

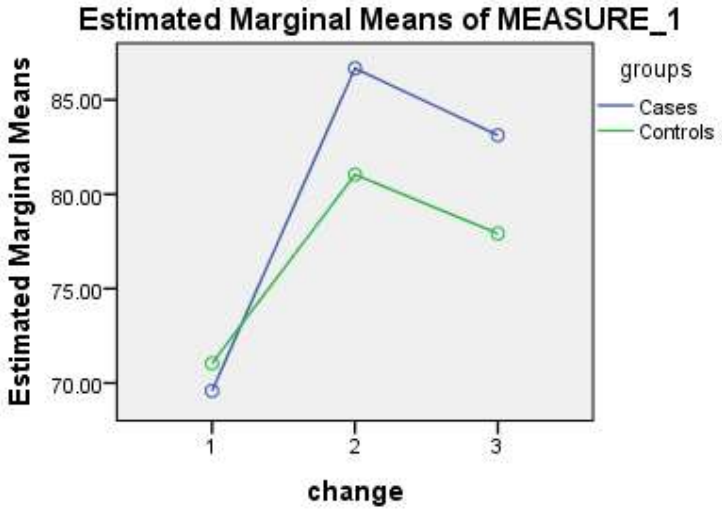
	Groups	Mean	Std. Deviation	N
Pre-test domain 4	Cases	69.5833	13.84840	15
	Controls	71.0417	9.77329	15
	Total	70.3125	11.80018	30
Post-test domain4	Cases	86.6667	10.79090	15
	Controls	81.0417	9.91500	15
	Total	83.8542	10.57619	30
Follow up domain 4	Cases	83.1250	11.25496	15
	Controls	77.9167	9.77329	15
	Total	80.5208	10.69019	30

Table 109: **Tests of Within-Subjects Effects**

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
change	2986.979	2	1493.490	58.983	.000
change * groups	236.979	2	118.490	4.680	.013
Error(change)	1417.969	56	25.321		

Graph 54: Profile Plots



DISCUSSION:

The Domain 4 of QOL for the case group shows a significant improvement statistically and clinically and that for the control group there is a significant improvement statistically. The graph also shows a rise upto a certain extent and after that it reduces to negative territory which means that there is a notable improvement for the intervention group but is not sustainable. To make it sustainable the intervention should be employed for a long time or to get a sustainable improvement at the optimum level the intervention should be adopted as a part of lifestyle permanently. Hence, the result is indicating that the intervention should be adapted in one's lifestyle especially for the senior citizen. To justify this statement the results of the control group shows slightly lower values compared to the intervention group.

8. RECOMMENDATION FOR FUTURE STUDY

- The study can be employed for a larger sample for receiving better results and also for testing the efficacy of the intervention.
- The length of the study intervention can be extended to a longer duration for about 6 months or a year to get better results in each individual.
- Week-wise yoga protocol can be employed to get a full length benefits to the older individuals and also energize and reach all aspects of their organ systems.
- One can also introduce a multi-centric study so that yoga can be benefited by older individuals of all places.
- Yoga can be therapeutically employed for each individual disease or disorder.
- Yoga as a branch of medical science is a vast subject with wide scope for research and benefits.

9. CONCLUSIONS

On the basis of concepts, analysis and clinical observations made in this study, the following conclusions were drawn-

Ageing is a natural inevitable irreversible, always progressive biological process associated with decline of physical and mental functions. Ageing occurs at different levels-social, behavioral, physiological, morphological, cellular and molecular.

The ageing process is different for everyone, and there is no strict list of events that are guaranteed to happen. However, everyone will go through some age-related changes, and most will require assistance from family, friends, or formal caregivers, which is likely to increase as they progress through the stages of ageing.

The quality of life of the elderly individuals was determined by the questionnaire – WHOQOL-Bref which consisted of 26 questions divided into 4 domains.

Statistical analysis showed significance in all major domains that is physical health, psychological health, social health and environment for change between the groups with only environmental domain having significance in both change within group and between groups. The overall quality of life showed no significant change with p value being 0.632 and 0.259 for change within groups. However, significant improvement observed clinically which enhances their day to day activities.

Hence to conclude, the study intervention even though it showed significant results, if done in a larger scale and for longer duration the overall result can be obtained in justified manner both clinically and statistically.

10. SUMMARY

Study titled “An observational study to evaluate the improvement in qualityof life of the elderly by practice of asana, pranayama and dhyana” was conducted.

The main objective of the study is to evaluate the effects of asana, pranayama and dhyana on improvement of overall quality of life of older individuals and also the improvement in following domains:

- Physical health
- Psychological health
- Social relationships
- Environment

First part of the observational study comprises of the contents- review of literature. It includes the review of ageing, its stages and theories, epidemiology and global health recommendations to delay the ageing processes. It also includes a review on asanas, pranayama and dhyana its history, significance and other important aspects.

Second part of this study comprises of materials and methods used, observations and results of the intervention, discussions on the review of literature, materials and methods, observations and results.This part also includes general observations, recommendation for further study, conclusion and summary of the study.

Total 30 partricipants were randomly selected from registered subjects for this study as per the protocol and assigned into two groups of trial and control. All the information necessary were collected by employing a case sheet proforma prepared specially for the study. The WHOQOL- Bref scale was used as a tool for assessment of the participant. This study comprised of 2 groups case and control group.

Patients were assessed using WHOQOL- Bref scale before, after the treatment, and as follow up and the scores were compared.

Once the study was completed the data recorded in the case sheet were analyzed and tabulated. The analysis was done using SPSS software.

The study reveals maximum no. of participants below the age group of 75 with male dominance. Most of them are having qualification up to high school and graduate level. Majority of them were retired employees with upper middle class income, urban residents and Hindus. The study also shows majority of them have sound pattern of sleep.

The overall result shows no significant change in the quality of life of the elderly individuals statistically, however significant improvement is seen clinically in the subject which was seen in their day to day life. As the duration of the study was small ad number of samples are also small, hence statistical significance was not observed in the study for overall effect. However, there was a significant improvement seen in all domains that is physical health, psychological health, social relationships and environmental health. The p values were significant for change between groups but showed little or no significance in change within groups. The domain of environment had significant change in change within group.

These results imply that the intervention, if continued and for longer duration, could've provided better results.

Hence from the results obtained, it can be inferred that the yoga asanas, pranayama and dhyana have significant effect in improving quality of life of elder individuals.

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12. ANNEXURE

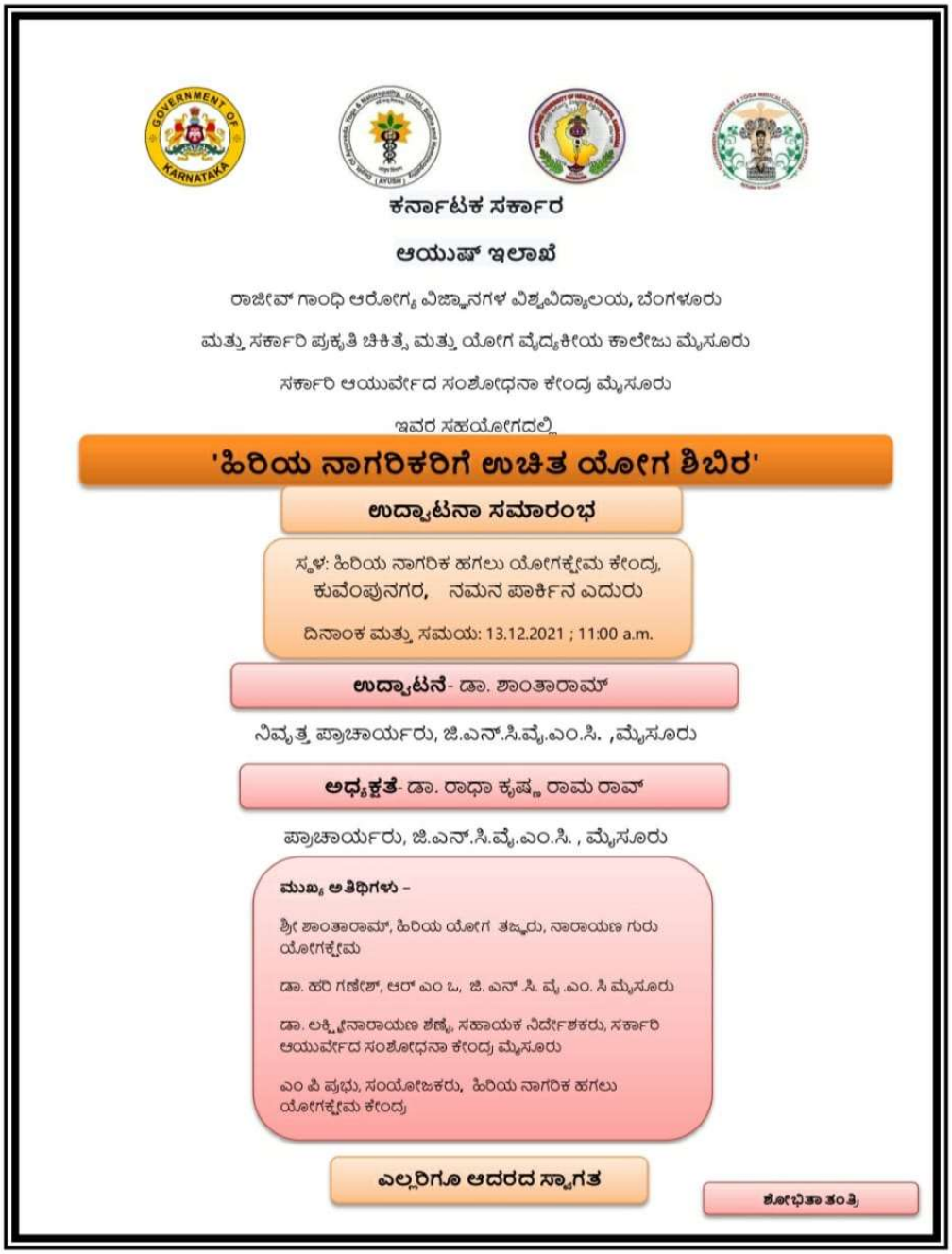
Annexure 1:

Banner of Inauguration of Yoga Training:

Banner of Seminar:

Annexure 2:

Invitation of Inaugural Function:



ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಆಯುಷ್ ಇಲಾಖೆ

ರಾಜೀವ್ ಗಾಂಧಿ ಆರೋಗ್ಯ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು

ಮತ್ತು ಸರ್ಕಾರಿ ಪ್ರಕೃತಿ ಚಿಕಿತ್ಸೆ ಮತ್ತು ಯೋಗ ವೈದ್ಯಕೀಯ ಕಾಲೇಜು ಮೈಸೂರು

ಸರ್ಕಾರಿ ಆಯುರ್ವೇದ ಸಂಶೋಧನಾ ಕೇಂದ್ರ ಮೈಸೂರು

ಇವರ ಸಹಯೋಗದಲ್ಲಿ

'ಹಿರಿಯ ನಾಗರಿಕರಿಗೆ ಉಚಿತ ಯೋಗ ಶಿಬಿರ'

ಉದ್ಘಾಟನಾ ಸಮಾರಂಭ

ಸ್ಥಳ: ಹಿರಿಯ ನಾಗರಿಕ ಹಗಲು ಯೋಗಕ್ಷೇಮ ಕೇಂದ್ರ,
ಕುವೆಂಪುನಗರ, ನಮನ ಪಾರ್ಕಿನ ಎದುರು

ದಿನಾಂಕ ಮತ್ತು ಸಮಯ: 13.12.2021 ; 11:00 a.m.

ಉದ್ಘಾಟನೆ- ಡಾ. ಶಾಂತಾರಾಮ್

ನಿವೃತ್ತ ಪ್ರಾಚಾರ್ಯರು, ಜಿ.ಎನ್.ಸಿ.ವೈ.ಎಂ.ಸಿ. ,ಮೈಸೂರು

ಅಧ್ಯಕ್ಷತೆ- ಡಾ. ರಾಧಾ ಕೃಷ್ಣ ರಾಮ ರಾವ್

ಪ್ರಾಚಾರ್ಯರು, ಜಿ.ಎನ್.ಸಿ.ವೈ.ಎಂ.ಸಿ. , ಮೈಸೂರು

ಮುಖ್ಯ ಅತಿಥಿಗಳು –

ಶ್ರೀ ಶಾಂತಾರಾಮ್, ಹಿರಿಯ ಯೋಗ ತಜ್ಞರು, ನಾರಾಯಣ ಗುರು ಯೋಗಕ್ಷೇಮ

ಡಾ. ಹರಿ ಗಣೇಶ್, ಆರ್ ಎಂ ಒ, ಜಿ. ಎನ್ .ಸಿ. ವೈ .ಎಂ. ಸಿ ಮೈಸೂರು

ಡಾ. ಲಕ್ಷ್ಮೀನಾರಾಯಣ ಶೆಣೈ, ಸಹಾಯಕ ನಿರ್ದೇಶಕರು, ಸರ್ಕಾರಿ ಆಯುರ್ವೇದ ಸಂಶೋಧನಾ ಕೇಂದ್ರ ಮೈಸೂರು

ಎಂ ಪಿ ಪ್ರಭು, ಸಂಯೋಜಕರು, ಹಿರಿಯ ನಾಗರಿಕ ಹಗಲು ಯೋಗಕ್ಷೇಮ ಕೇಂದ್ರ

ಎಲ್ಲರಿಗೂ ಆದರದ ಸ್ವಾಗತ

ಶೋಭಿತಾ ತಂಡ್ರಿ

ಕಾರ್ಯಕ್ರಮಗಳು

1) ಪ್ರಾರ್ಥನೆ
2) ಪ್ರಾಸ್ತಾವಿಕ ಭಾಷಣ
3) ಸ್ವಾಗತ ಭಾಷಣ
4) ಉದ್ಘಾಟನಾ ಭಾಷಣ
5) ಅಧ್ಯಕ್ಷ ಭಾಷಣ
6) ವಂದನಾರ್ಪಣೆ

Annexure 3:

Invitation of Seminar:

ಉಪನ್ಯಾಸ ಕಾರ್ಯಕ್ರಮ

1) 4- 4:30 p.m: ಡಾ. ರಾಘವೇಂದ್ರ ಪೈ,
ಖ್ಯಾತ ಯೋಗ ತಜ್ಞರು, ಮೈಸೂರು
ವಿಷಯ: ಹಿರಿಯ ನಾಗರಿಕರಿಗೆ ಯೋಗ ಮತ್ತು ಧ್ಯಾನ

2) 4:30 - 5:00 p.m: ಡಾ. ಗುರುಬಸವರಾಜ್ ,
ಪ್ರಾದ್ಯಾಪಕರು, ಜೆ. ಎಸ್. ಎಸ್. ಆಯುರ್ವೇದ ವೈದ್ಯಕೀಯ ಮಹಾವಿದ್ಯಾಲಯ, ಮೈಸೂರು
ವಿಷಯ: ಸೂರ್ಯನಮಸ್ಕಾರ ಮತ್ತು ಅದರ ಮಹತ್ವ

3) 5:00- 5:30 p.m: ಯೋಗಾತ್ಮ ಶ್ರೀಹರಿ,
ಸಂಸ್ಥಾಪಕರು, ಜಿ.ಎಸ್.ಎಸ್. ಯೋಗ ಫೌಂಡೇಶನ್, ಮೈಸೂರು
ವಿಷಯ: ಮುದ್ರಾ ಮತ್ತು ಪ್ರಾಣಾಯಾಮ

Annexure 4:

WHOQOL-BREF

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last four weeks.**

		Very poor	Poor	Neither poor nor good	Good	Very good
1.	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2.	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last four weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	5	4	3	2	1
4.	How much do you need any medical treatment to function in your daily life?	5	4	3	2	1
5.	How much do you enjoy life?	1	2	3	4	5
6.	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7.	How well are you able to concentrate?	1	2	3	4	5
8.	How safe do you feel in your daily life?	1	2	3	4	5
9.	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

		Not at all	A little	Moderately	Mostly	Completely
10.	Do you have enough energy for everyday life?	1	2	3	4	5
11.	Are you able to accept your bodily appearance?	1	2	3	4	5
12.	Have you enough money to meet your needs?	1	2	3	4	5
13.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very good
15.	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16.	How satisfied are you with your sleep?	1	2	3	4	5
17.	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18.	How satisfied are you with your capacity for work?	1	2	3	4	5
19.	How satisfied are you with yourself?	1	2	3	4	5

20.	How satisfied are you with your personal relationships?	1	2	3	4	5
21.	How satisfied are you with your sex life?	1	2	3	4	5
22.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last four weeks.

		Never	Seldom	Quite often	Very often	Always
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	5	4	3	2	1

Do you have any comments about the assessment?

_____

_____

[The following table should be completed after the interview is finished]

		Equations for computing domain scores	Raw score	Transformed scores*	
				4-20	0-100
27.	**Domain 1**	(6-Q3) + (6-Q4) + Q10 + Q15 + Q16 + Q17 + Q18 ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐	a. =	b:	c:
28.	**Domain 2**	Q5 + Q6 + Q7 + Q11 + Q19 + (6-Q26) ☐ + ☐ + ☐ + ☐ + ☐ + ☐	a. =	b:	c:
29.	**Domain 3**	Q20 + Q21 + Q22 ☐ + ☐ + ☐	a. =	b:	c:
30.	**Domain 4**	Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25 ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐	a. =	b:	c:

* See Procedures Manual, pages 13-15

Annexure 5:

Government of Karnataka

Ragiv Gandhi University of Health Sciences

Government Nature Cure and Yoga Medical College and Hospital

Government Ayurveda Research Center

Mail: shobhithat@gmail.com Mobile No.:8971557089

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Participant's Photo

"Free Yoga Training for Senior Citizens"

REGISTRATION FORM

1	Name	
2	Home Address	
3	Mobile Number Email ID Aadhar Card Number	
4	Have you attended yoga classes earlier? If yes, specify venue and your experience in yoga class.	
5	Your expectations from yoga training.	
6	Do you need such types of classes often? If yes, how many days?	

Date:

Venue:

Participant Signature

Government of Karnataka

Ragiv Gandhi University of Health Sciences

Government Nature Cure and Yoga Medical College and Hospital

Government Ayurveda Research Center

Brundavana Extension, Mysuru

Mail: shobhithat@gmail.com Mobile No.:8971557089

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"Free Yoga Training for Senior Citizens"

FEEDBACK FORM

SN	Questions	Very Well Structured	Well Structured	Somewhat Structured	Very structured
1	Do you like the format of training programme?				

2	Had your expectations fulfilled?	**Yes**				**No**	
3	Content of yoga class	**Good**				**Better**	**Not upto the mark**
4	How was your practical experience?	**Good**				**Better**	**Not upto the mark**
5	Is it useful for your future?	**Very Useful**				**Useful**	**Not Useful**
6	Do you like to continue to practice yoga intervention in future?	**If Yes**	Regularly	Twice a week	Once a week	**No**	**Can't Say**

8. Any specific comment from your side?

9. Do you need such type of programme in future?

9. Overall rating of the programme: 1 2 3 4 5

Government of Karnataka

Ragiv Gandhi University of Health Sciences

Government Nature Cure and Yoga Medical College and Hospital

Government Ayurveda Research Center

Mail: shobhithat@gmail.com Mobile No.:8971557089

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Photo

"Free Yoga Seminar for Senior Citizens"

REGISTRATION FORM

1	Name	
2	Home Address	
3	Mobile Number Email ID Aadhar Card Number	
4	Have you attended yoga seminar earlier?	
5	Your expectations from yoga seminar.	
6	Do you need such types of seminars often?	

Date:

Venue:

Participant Signature

Government of Karnataka

Ragiv Gandhi University of Health Sciences

Government Nature Cure and Yoga Medical College and Hospital

Government Ayurveda Research Center

Brundavana Extension, Mysuru

Mail: shobhithat@gmail.com Mobile No.:8971557089

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"Free Yoga Seminar for Senior Citizens"

FEEDBACK FORM

SN	Questions						
1	Do you like the format of seminar programme?	**Very Well Structured**		**Well Structured**		**Somewhat Structured**	**Very structured**
2	Had your expectations fulfilled?	**Yes**				**No**	
3	Content of seminar	**Good**			**Better**	**Not upto the mark**	
4	How was your practical experience?	**Good**			**Better**	**Not upto the mark**	
5	Is it useful for your future?	**Very Useful**			**Useful**	**Not Useful**	
6	Do you like to continue to practice yoga in future?	**If Yes**	Regularly	Twice a week	Once a week	**No**	**Can't Say**
7.	Do you need such training in future?	**If Yes**	Regularly	Often	Some times	**No**	**Can't say**

8. Any specific comment from your side?

9. Overall rating of the programme: 1 2 3 4 5

Annexure 6:

GOVERNMENT NATURE CURE AND YOGA MEDICAL COLLEGE, MYSURU

Title of the Project:

An observational study to evaluate the improvement in quality of life of the elderly by practice of asana, pranayama and dhyana.

CERTIFICATE BY INVESTIGATOR

Date:

Serial. No:

This is to certify that I have disclosed full details about this observational study to the patient Mr/Mrs/Ms…… In the words that is clearly understood by the patient.

Signature……

CONSENT BY SUBJECT

Date:

I Mr/Mrs/Ms……., have been informed to my satisfaction by the attending physician, the purpose of the observational trial and the nature of treatment and follow up.

I am also aware of my right to opt out of the trial at any time during the course of the trial without having to give reasons for doing so.

I, exercising my free power of choice, hereby give my consent to be included as a subject in the trial on **"An observational study to evaluate the improvement in quality of life of the elderly by practice of asana, pranayama and dhyana"**.

Signature……

CASE SHEET

Name of the patient :

Age :

Sex :

Religion :

Educational Status :

Occupation :

Habitat : Urban/Rural

Address :

Economic Status :

Ph. No :

1. CHIEF COMPLAINTS:

2. HISTORY OFCHIEF COMPLAINTS:

3. Associated complaints:

4. PAST HISTORY:

History of:

- Diabetes:
- Hypertension:
- Any neurological illness:
- Any Cardiovascular illness:
- Others:

5. TREATMENT HISTORY:

- Previous Medication:
- Drugs used:
- Response: no response/ mild/ moderate/ good

6. FAMILY HISTORY:

- History of genetic disorders/ respiratory/ epilepsy/ others:

5. PERSONAL HISTORY:

i. Diet: a) Vegetarian:

b) Mixed:

ii. Sleep:

iii. Addiction: a) Smoking:

b) Alcohol:

c) Tobacco:

d) Others:

iv. Habits:

If the patient is female:

a) Menstrual history:

b) Obstetric History:

VITAL EXAMINATION:

Pulse Rate:

Respiratory Rate:

Blood Pressure:

Temperature:

Body Weight:

Height:

BMI:

GENERAL PHYSICAL EXAMINATION:

a. Pallor:

b. Icterus:

c. Cyanosis:

d. Clubbing:

e. Lymphadenopathy:

f. Edema:

g. Skin Changes:

SYSTEMIC EXAMINATION:

Respiratory System:

Cardiovascular System:

Central Nervous System:

Gastrointestinal System:

Musculoskeletal System:

13. Photo Gallery

Inaugaration of the Yoga Camp

Registration and Consent taking

The Participants performing Yoga

The Participants performing Yoga

End of the camp

Seminar Programme

Feedback from Participants:

"Yoga is a necessity to the old age people. It helps one to sleep well and walk around freely…"

"… due to corona we couldn't walk around properly, and had a sedentary lifestyle, due to this the digestion wasn't happening properly… By doing yoga it has helped us a lot.."

" .. It was a great feeling, I had neck pain and back pain which got relieved. Shavasana and dhyana helped us get relief, made me feel like I was sent to a different world…"

"… We felt tension free, yoga can be most helpful when one performs on daily basis… we are inspired to do yoga as a daily routine on this 15 day camp.."