CHAPTER I

INTRODUCTION

CHAPTER-I

INTRODUCTION

1.1 DISABILITY

Being human often involves experiencing a disability at some point in life, whether temporarily or permanently. Approximately 16% of the global population, or 1.3 billion people, are significantly disabled. The aging population contributes to an increase in the prevalence of communicable diseases, which can also lead to disabilities.

Disability arises from the interaction between individuals with health conditions such as depression, Down syndrome, or cerebral palsy—and environmental and societal factors, including negative attitudes, inaccessible public spaces and transportation, and lack of social support. A person's environment greatly influences their experience and the severity of their disability. Inaccessible environments frequently hinder the full and effective participation of individuals with disabilities in community life. Removing these barriers and providing support to people with disabilities can enhance social engagement **(World Health Organization).**

Disability or inability means lack of ability. The functional ability of the person decreases due to impairment of any individual. disability is a situation which the individual finds himself unable or feels an obstruction to complete the work expected of him according to his age, gender or social and cultural background. In other words, disability is a resultant obstruction or interruption of impairment in performing a work considered to be within the normal limit of any individual **(Bobath,1990).**

1.2 PREVALENCE OF DISABILITY IN THE WORLD

Approximately 15% Many individuals globally are living with a disabilities, of which 24% have severe functional challenges. The incidence of disabilities worldwide is greater than the 1970s-era WHO estimates, which put the rate at about 10%. The aging of the population, the quick spread of chronic illnesses, advancements in disability measurement techniques, and other factors have contributed to many individuals globally living with a worldwide estimate of impairment.

Evidence about the condition of individuals with disabilities worldwide is reviewed in the first ever WHO/World Bank global report on disability. Chapters on disability definition and assessment are followed by topic-specific chapters on health, employment, enabling settings, rehabilitation, help and support, and education. Every chapter includes an overview of the challenges faced as well as example studies illustrating how other nations have addressed issues by encouraging best practices. The study provides nine specific policy and practice suggestions in its last chapter, all of which, if implemented, could significantly enhance the lives of those with disability **(World Health Organization).**

1.3 DISABILITY THE INCREASE IN INDIA

According to an estimate by the WHO, globally, 15 percent of most people have some kind of disability, while over 80 percent of that share lives in low and middle income countries. While of the more than 1.36 billion people live in India, more than 2.2% are severely mentally or physically disabled.. In today's progressive era, where integration and inclusion of all people is emphasized as the gateway toward sustainable development, targeted measures for the healthy and happy being of those who are disabled are becoming more indispensable. Conceptually, since the

condition of disability is rather transient than static, there isn't one universal definition of what comprises a disability or who is considered disabled. In India, the list of criteria that categorizes people as disabled was revamped in 2016 and came into effect with the Persons with Disabilities' Freedoms act (RPwD) – an established list of disabilities comprising of 21 criteria. As stated by the Census 2021, the revised definition based on the RPwD act of 2016 also includes the recognition of physical deformities and injuries relative to acid attacks as disabilities which entitles these victims to various forms of governmental aid and support. **(World Health Organization)**

1.4 TYPE OF DISABILITIES

Individuals with Disabilities' Rights (RPwD) Act, 2016, which was passed on December 28, 2016, went into effect on April 19, 2017. It states that the definition of disability is a dynamic and ever-changing notion. The following specific impairments are covered under the Act:

1.4.1 Physical Disability

Loco-motor Disability

1. Leprosy Cured Person
2. Cerebral Palsy
3. Dwarfism
4. Muscular Dystrophy
5. Acid Attack Sufferers

Visual Disability

1. Lack of vision
2. Low vision

Deficit in Hearing

1. Deaf
2. Incapable of Hearing

1.4.2 Intellectual Disability

1. Specific Learning Disabilities
2. Autism Spectrum Disorder

1.4.3.Mental Behaviour (Mental Illness)

1.4.3.1.Disability caused due to-Chronic neurological disorders like

1. Multiple Sclerosis
2. Parkinson's Disease

Blood Illness

1. Haemophilia
2. Thalassemia
3. Sickle cell illness

1.4.4.Multiple Disabilities

1.4.4.1 Lack of vision

This condition occurs when an individual experiences total blindness or significant loss of vision in the better eye, even with corrective lenses, resulting in vision not exceeding 6/60 or 20/200 on the Snellen scale. It can also include a field of vision restricted to an angle of 20 degrees or less.

1.4.4.2 An individual with poor eyesight

This refers to individuals whose vision remains impaired despite conventional refractive correction or therapy. However, they can still use their vision to plan or perform tasks with the aid of appropriate assistive technology.

1.4.4.3 Mental Disease

This category encompasses a group of non-progressive disorders characterized by impaired motor control and posture. These disorders are caused by brain damage or insults that occur during the perinatal, neonatal, or early developmental stages.

1.4.4.4.Hearing impairment

A loss within the frequency range of discourse of sixty dB or better still, more Ear.

1.4.4.5 People healed of leprosy

An individual who has recovered from leprosy but still experiences significant physical deformities, advanced age, or obvious deformity and paresis. Despite these challenges, they possess sufficient mobility in their hands and feet to participate in regular economic activities.

1.4.5 Loco-motor Disability

This type of disability involves impairments in the bones, joints, or muscles, which significantly limit limb movement or are associated with certain forms of cerebral palsy. Conditions that often result in loco-motor disability include poliomyelitis, cerebral palsy, amputations, spinal injuries, head injuries, soft tissue injuries, fractures, and muscular dystrophies.

1.4.5.1 Mental Illness

This refers to any mental disease not related to mental impairment.

Mental Retardation: A disorder characterized by halted or incomplete mental development, notably affecting intellectual functions and abilities in thinking, speaking, moving, and social interaction.

Autism: A disorder marked by repetitive and ritualistic behavior, predominantly impacting social and communication skills, and characterized by uneven skill development.

Multiple Disability: The combination of two or more disabilities, such as blindness or low vision, hearing and speech impairments, locomotor impairment including healed leprosy, mental illness, and mental retardation, as described under The Person with Disabilities (Equal Opportunities, Protection of Rights, and Full Participation) Act of 1995.

1.4.6 Dyslexia and Other Learning Disabilities

These conditions affect a person's ability to learn, understand, and use spoken, read, written, or nonverbal information, impacting skills like memory, reasoning, problem-solving, organization, functional literacy, and perception.

Dyspraxia: The inability to plan and execute coordinated movements appropriately.

Dysgraphia: Difficulties with writing, both in terms of expression and technical aspects, often accompanied by spelling problems.

Dyscalculia: The inability to perform mathematical calculations.

ADHD (Attention Deficit and Hyperactivity Disorder): Characterized by impulsivity, distractibility, and hyperactivity.

1.4.6.1 Impairment

An impairment refers to a missing or damaged body part, such as a severed limb, paralysis following polio, diabetes, mental impairment, nearsightedness, reduced hearing ability, facial deformity, or other abnormal conditions.

1.4.6.2 Disabilities

Disabilities stem from impairments and result in the inability to walk, see, talk, hear, read, write, count, lift, or engage with one's environment.

Temporary Total Disability: A period during which the affected individual cannot work at all due to conditions requiring orthopedic, ophthalmological, auditory, speech, or other medical care.

Temporary Partial Disability: The period after rehabilitation has progressed sufficiently for the individual to begin working again.

Permanent Disability: When the condition remains stable and the phase of maximal development [from any medical therapy] has been achieved, permanent harm or the inability to use a portion of the body.

1.4.6.3 Handicap

When a disability prevents a person from performing at a certain level during a specific period of their life, it becomes a handicap.

1.4.6.4 Rehabilitation

The process of helping people with impairments get to and stay at their best levels of intellectual, motor, mental, or social functioning;

1.4.6.5 Individual with Disabilities

A person who, according to a medical authority, has at least 40% of any kind of handicap. medical authority.

1.5 IMPORTANCE OF FITNESS FOR DISABILITY PEOPLE

1.5.1 Physical Health Benefits

1. **Reduced Risks of Chronic Diseases:** Regular exercise helps reduce the risk factors for high blood pressure, coronary heart disease,colon cancer, and diabetes.

2. **Weight Management:** Exercise contributes to weight control and helps prevent obesity- related conditions.

3. **Improved Cardiovascular Health:** It strengthens the heart and improves blood circulation.

4. **Enhanced Respiratory Function:** Physical activity supports respiratory health.

1.5.2 Mental Health Benefits

1. Endorphin Release: Exercise triggers the release of endorphins, which can alleviate symptoms of anxiety and depression.

2. Stress Reduction: Physical activity helps in managing stress levels.

3. Improved Sleep: Regular exercise contributes to better sleep quality.

4. Clearer Thinking: It can enhance cognitive function and mental clarity.

5. Increased Self-Esteem: Achieving fitness goals can boost self-confidence and self-esteem.

1.5.3 Social Benefits

1. **Community Engagement:** Participating in group activities or sports promotes social interaction.

2. **Reduced Isolation:** Exercise provides an opportunity to connect with others and combat feelings of loneliness.

3. **Supportive Environment:** Fitness centers, sports teams, and other exercise settings can offer warmth and encouragement.

1.5.4 Specific Benefits for Disabled Individuals

1. **Reduced Health Risks:** Disabled individuals may face higher risks of certain health conditions, making exercise crucial for overall well-being.

2. **Mental Health Support:** Exercise can be a natural remedy for reducing anxiety, stress, and symptoms of depression in disabled individuals.

3. **Social Inclusion:** Engaging in group activities helps combat isolation and promotes a feeling of community.

4. **Improved Self-Belief:** Overcoming barriers to exercise can result in positive self image, increased self-worth, and a sense of accomplishment.

1.5.5 Barriers to Exercise for Disabled Individuals

1.5.5.1 Environmental Challenges

1. Limited Accessibility: Locations might not always offer accessible facilities, hindering participation.

2. **Engagement with Management:** Advocacy for better facilities and communication with venue management can address accessibility issues.

1.5.5.2 Social Perceptions

1. **Fear of Stigma:** Some disabled individuals may fear standing out or being perceived differently.

2. **Embracing Diversity:** Encouraging a more inclusive and diverse perspective on disability can help overcome societal barriers.

1.5.5.3 Self-Belief and Worth

1. **Negative Emotions:** Negative self-perceptions may reduce engagement in physical activity.

2. **Positive Self-Image:** Promoting positive self-image can lead to increased engagement, opportunities, and friendships.

1.6 IMPORTANCE OF SPORTS PARTICIPATION FOR DISABILITY PERSONS

The provided passage emphasizes the significant role of sports in breaking down barriers and fostering inclusion for individuals with disabilities.These are important details emphasizing the importance of sports in this context:

1.6.1 Transcending Barriers:

Sports have a unique ability to transcend linguistic, cultural, and social barriers. The universal popularity of sports provides a venue for inclusion and adaptation.

1.6.2 Addressing Societal Barriers:

People with impairments frequently meet societal barriers, including negative perceptions and discrimination. The disability-related stigma may ensue in exclusion from education, employment, and community life.

1.6.3 Trans formative Power of Sport:

Sport helps reduce stigma and discrimination by highlighting the skills of individuals with disabilities. Through positive interactions in a sports context, assumptions about the capabilities of people with disabilities may be reshaped.

1.6.4 Empowering Persons with Disabilities:

Sports empower helping people with disabilities reach their full potential potential. Acquisition of social skills, independence, and both mental and physical strength through sports can contribute to self-sufficiency.

1.6.5 Importance for Women with Disabilities:

Women with impairments often face double discrimination according to gender and disability. Sports can challenge stereotypes and negative perceptions by presenting chances for women with disabilities to showcase their physical abilities.

1.6.6 Contribution to The Millennium Development Goals (MDGs):

Sports contribute to achieving MDGs, such as promoting lowering poverty and hunger, promoting gender equality, and providing universal elementary education. Sports-based opportunities can help reduce stigma, empower women and girls with disabilities, and enhance employment prospects .

1.6.7 Convention on the Status of Disabled Persons under The United Nations

The UN Convention recognizes the importance of sports for those who are disabled. Article 30 emphasizes the need the requirement to encourage and assist the involvement of people with impairments in professional sports activities. It calls for access to sports and recreational activities.

1.7 OLYMPIC

The term "Olympic" generally refers to the Olympic Games, which are a major international sporting event featuring a variety of summer and winter sports competitions.Every four years, the Olympic Games are held.with the Games of Summer and Winter alternately every two years.

The name "Olympic" is derived from Mount Olympus in Greece, which was considered the home of the ancient Greek gods. The Olympic Games of antiquity were a sequence of athletic competitions held in Olympia, Greece, starting in 776 BCE and continuing for nearly 12 centuries. The modem Olympic Games, inspired by the ancient tradition, were revived in 1896 and have since become the most prestigious and widely watched sporting event in the world.

The Olympic Games are known for promoting international unity, sportsmanship, and friendly competition among athletes from different countries. The event has a rich history and symbolism, with the Olympic rings representing the five continents and the Olympic flame symbolizing the enduring spirit of the Games. The

Olympic motto, "Citius. Altius, Fortius" (Faster, Higher, Stronger), reflects the pursuit of excellence and improvement in both athletic and personal endeavors.

Moreover, to the sports competitions,the Olympic Competition also provides a platform for cultural exchange and celebration of diversity, gathering together individuals from diverse nations and backgrounds. In charge of these matters is the International Olympic Committee (IOC).organizing and overseeing the Olympic Games, and host cities are selected through a competitive bidding process.Overall, the term "Olympic is synonymous with the quadrennial global sporting event that promotes athleticism, international cooperation, and the ideals of fair play and peace . **(International Committee for Olympic Games (IOC)**

1.8 TYPES OF OLYMPIC

Basically, there are two types of Olympic Games: the Summer Olympics and the Winter Olympics. Every four years, both events take place. But they alternate every two years, ensuring that there is a Olympic Games taking place every two years.

1.8.1. Summer Olympics:

The Summer Olympics feature a wide range of sports, including athletics, swimming, gymnastics, team sports (such as basketball, soccer, and volleyball), cycling, and many others.

The Summer Olympics have a history dating back to the inaugural modern Olympics held in Athens in 1896.

1.8.2 Winter Olympics:

The Winter Olympics focus on cold-weather sports and events, including skiing, snowboarding, ice hockey, figure skating, and bobsleigh, among others.

The Winter Olympics have a more recent history, with the first Winter Games taking place in Chamonix, France, in 1924.

Apart from these primary categories, there are further Olympic Games which are held every four years for young people young athletes. The Youth Summer Olympics and Youth Winter Olympics provide a platform for young talents to showcase their skills and gain international competition experience.

The Paralympic Games, which also occur every four years, coinciding with the Summer Olympics,showcase athletes with physical disabilities competing in various categories of sports. The Paralympics have both Winter and Summer editions.

Each Paralympic and Olympic Games Games includes several different types of sports, and the specific sports contested could differ marginally from a single edition, as the International Olympic Committee (IOC) moves on to the next, occasionally introduces new events or disciplines while removing others to keep the Games dynamic and reflective of evolving sporting interests. **(International Olympic Committee (IOC))**

1.9 PARALYMPIC

The term "Paralympic" derives from the Greek preposition "para," meaning "beside" or "alongside," combined with the word "Olympic." The name signifies that the Games for Paralympics exist alongside the Olympic Competition, illustrating how the two movements coexist and share a parallel status. The Paralympics are an inclusive and worldwide competition spanning many sports for athletes with impairments,held in conjunction with the Olympic Games, emphasizing the principles of equality, sportsmanship, and athletic excellence for individuals with impairments.

1944: Dr. Ludwig Guttmann opened a spinal injuries center at Stoke Mandeville Hospital in Great Britain to assist war veterans and civilians injured during World War II.

1948: On the day of the Opening Ceremony of the London 1948 Olympic Games, Dr. Guttmann's organizes the first competition for wheelchair athletes, known as the Stoke Mandeville Games, involving 16 injured servicemen and women participating in archery.

1950s:1952: Dutch ex-servicemen join the movement, and the International Stoke Mandeville Games are founded.The Stoke Mandeville Games have begun to evolve from rehabilitation sports to recreational and competitive sports.

1960s:1960: The Stoke Mandeville Games become the Paralympic Games, taking place in Rome, Italy, featuring 400 athletes from 23 countries.

1964: The International Sport Organization for the Disabled (ISOD) is created to offer chances for sportsmen who have impairments beyond those affiliated with the Stoke Mandeville Games.

1970s:1976: The first Winter Paralympic Games are held in Sweden. The International coordinating Committee Sports for the Disabled in the World (ICC) was created in 1982 to coordinate the efforts of various international disability-oriented sports organizations.

1980s:1988: The Paralympic Games start taking place in the same cities and venues as the Olympic Games, beginning with the Summer Olympics in Seoul, Korea.

1989:The International Paralympic Committee (IPC) is founded in Dusseldorf, Germany, as the global governing body of the Paralympic Movement.

1990s:1992: The Paralympic sports continue to be held alongside the Olympic Games,now in Albertville, France, for the Winter Games. The IPC embraces all impairments and is officially established as the international non-profit organization governing the Paralympic Movement.

This historical timeline highlights the gradual development and internationalization of the Paralympic Movement, from its early roots in rehabilitation sports to becoming a parallel and prestigious event alongside the Olympic Competition.The Paralympics have expanded to include a diverse range involving sports and athletes with various impairments, promoting inclusivity and excellence in sports for individuals with disabilities.**(International Paralympic Committee (IPC))**

1.10 PARALYMPIC GAMES

There are 28 Paralympic sports sanctioned by the International Paralympic Committee (IPC), with 22 for the Summer Paralympics and six for the Winter Paralympics. The two most recent additions for the Summer Paralympics are badminton and take down, making their debut at the Tokyo 2020 Games. For the Winter Paralympics, snow boarding was introduced at the Sochi 2014 Paralympic Winter Games. Here is the list of Paralympic sports.

1.10.1 Summer Sports (22):

- Para Archery
- Para Athletics
- Para Badminton
- Blind Football
- Boccia
- Para Canoe
- Para Cycling
- Para Equestrian
- Goalball
- Para Judo
- Para Powerlifting

- Para Rowing
- Shooting Para Sport
- Sitting Volleyball
- Para Swimming
- Para Table Tennis
- Para Taek wondo
- Para Triathlon
- Wheelchair Basketball
- Wheelchair Fencing
- Wheelchair Rugby
- Wheelchair Tennis

1.10.2 Winter Sports (07)

- Para Alpine Skiing Para Biathlon
- Para Cross-Country Skiing
- Para Ice Hockey
- Para Snowboard
- Para Snowboard
- Wheelchair Curling

These sports represent a diverse range of disciplines and give athletes the chance to various impairments to participate at the greatest level in the Paralympic Games in both the summer and winter Games.

1.11 ELIGIBLE IMPAIRMENT TYPES AND ASSOCIATED HEALTH CONDITIONS:

1. Impaired Muscle Power: Reduced force generated by muscles. Examples: spinal cord injury, muscular destruction.

2. Impaired Passive Range of Movement: Restricted or lack of passive movement in joints. Examples: arthrogryposis, contracture from joint Immobilization or trauma

3.Limb Loss or Limb Deficiency: Total or partial absence of bones or joints. Examples: traumatic amputation, congenital limb deficiency.

4. Leg-Length Difference: Disturbance of limb growth or trauma leading to different leg lengths

5. Short Stature: Reduced length in lower limb and/or trunk bones. Examples: achondroplasia. growth hormone dysfunction.

6. Hypertonia: Increased muscle tension and reduced ability to stretch. Example: cerebral palsy. traumatic brain injury.

7. Ataxia: Uncoordinated movements from injury to the central nervous system Examples,catastrophic brain injury, cerebral palsy, stroke, multiple sclerosis

8. Athetosis: Continual slow, involuntary movements. Examples: Injury to the brain from trauma, cerebral palsy,stroke.

9. Visual Impairment: Reduced or no vision from damage to the eye structure or visual pathways.Examples: retinitis pigmentosa, diabetic retinopathy.

10. Intellectual Impairment: Restriction in intellectual functioning before age 18, affecting adaptive skills.

11. Non-Eligible Impairments: Examples include pain, Hearing loss, a weak muscular tone,joint hypermobility, joint instability, impaired endurance, impaired reflex functions, impaired cardiovascular and respiratory functions, impaired metabolic functions, and tics and mannerisms

12. Health Conditions that Do Not Lead to Eligible Impairment: Examples Include conditions causing pain, fatigue, joint hypermobility or hypotonia, and psychological or psychosomatic conditions

1.11.1 Classification Systems:

Developed by International Federations (IFs) governing each sport. Decide eligible impairment types for their sport and the severity required for eligibility Different sports may have specific eligibility criteria (Minimum Impairment Criferia MC) Visual impairment classification applies across all sports but may have different class names It's important to note that Paralympic classification systems are sport-specific, ensuring fair competition based on the impacts of impairments on each particular sport.The emphasis is on the functional impact of impairments on an athlete's performance in their chosen sport

1.12 SITTING VOLLEYBALL IN THE PARALYMPIC GAMES

Men's sitting volleyball was first included in the Paralympic Games in 1900 . women's version of sitting volleyball was introduced to the Paralympic Games later, making its debut in 2004.

Sitting volleyball is a kind of sport created especially for players with lower limb impairments who play the game while seated.

The sport is governed by World Para volley, the international federation responsible for the organization and promotion of sitting volleyball at the global level. Sitting volleyball has since become a crucial component of the Paralympic game, providing athletes.

Sitting volleyball has since become a crucial component of the Paralympic Games, providing athletes with lower limb impairments the opportunity to compete to the best of their ability in this dynamic and challenging team sport.

1.12.1 Classification In Sitting Volleyball:

- Sitting volleyball athletes may be amputees or have a loss of muscular strength or flexibility in a joint.
- Being unable to stand is not a requirement for playing sitting volleyball.
- Two are present.sports classes in sitting volleyball: VS1 and VS2, with VS1 being more severely impaired.
- Impairments can affect either the upper or lower limbs, or both.
- Teams are allowed to have up to two players classified as VS2 on the roster

(International Paralympic Committee (IPC))

1.12.2 Basic Rule Differences Between Sitting and Standing Volleyball

TABLE - I

CLASSIFICATION OF SITTING AND STANDING VOLLEYBALL

Game Characteristics	Sitting	Standing
Court Dimensions	10 m (32 ft, 8 in.) x 6 m (19 ft, 7 in.)	18 m (59 ft) x 9 m (29 ft, 5 in.)
Attack Lines	2 m (6 ft, 5 in.) from the middle of the center line	3 m (9 ft, 8 in.) from the middle of the center line
Net Size	6.5m(21ft,7in.)x 8m(2ft,6in.)	9.5 m (31 ft, 2 in.) x 1 m (3 ft, 3 in.)
Net Height	1.15 m (3 ft, 8 in.) (men) 1.05 m (3 ft, 4 in.) (women)	2.43m (7 ft,9in.)(men) 2.24m(7ft,3in.)(women)
Equipment	Not allowed to sit on thick materials	NA
Play	The positions of players are determined by the position of their buttocks.	Positions of players are determined by the position of their feet contacting the ground.
	Players are not allowed to lift their buttocks from the court	NA

	when carrying out any type of attack hit.	
	When serving, the server must be in the service zone and buttocks must not touch the court.	When serving, the server's feet must be in the service zone and must not touch the court.
	Only front-row players are allowed to block the opponent's service.	It is a fault to block the opponent's service. (**Joseph P.Winnick 2005)**

1.13 FITNESS

“Fitness is a person's capacity to survive a full and balanced existence". Current studies in education and research on physical education show that children are distinct entities consisting of their intellect, body, soul, and social being. These united and integrated persons are the result of several forces and situations acting upon them they are made up of numerous components and qualities.

Fitness and health are not identical, yet they are closely linked, and fitness is vital to every facet of health. While fitness offers among the most important components to living a healthy life to the fullest, good health offers a strong base upon which fitness is built. Fitness is framed by the absence of illness, spontaneous growth, effective exercise, mental clarity, and emotional balance. It's been stated that being fit adds "life to one's years, not just years to one's life."

Exercise results in fitness.Studies have indicated that physical activity and training have significant impacts on people's general health. There has been a renaissance of interest in fitness and an endeavor to achieve and maintain it because of the connection between health and fitness. **(Prof.A.Yobu 2010)**

1.13.1 The Importance of Fitness

Fitness is crucial for overall well-being and encompasses various aspects of physical, mental, and even social health.Here are a few main justifications highlighting the importance of fitness.

1.13.1.1 Physical Health

1. Cardiovascular Health: Frequent exercise lowers the risk of heart disease and promotes heart health.disease, and lower blood pressure.

2. Weight Management: Fitness plays a significant role in achieving and maintaining a healthy weight, reducing the possible danger of obesity-related conditions.

3. Muscle Strength and Endurance: Frequent exercise improves muscular strength, flexibility, and endurance, promoting better overall physical function.

1.13.1.2 Mental Health

1. Stress Reduction: Exercise triggers the release of endorphins, which act as natural mood lifters, reducing stress and anxiety.

2. Improved Cognitive Function: Exercise has been connected to better cognitive function, including improved memory, concentration, and problem-solving skills.

3. Better Sleep: Regular exercise can contribute to improved sleep quality, helping to regulate sleep patterns.

1.13.1.3 Disease Prevention:

1. Reduced Risk of Chronic Diseases: Frequent exercise can reduce the risk of various chronic conditions, such as diabetes, type 2, certain cancers, and osteoporosis, immune.

2. System Boost: Regular exercise supports a healthy immune system, making the body more resilient to infections and illnesses.

1.13.1.4 Quality of Life

1. Increased Energy Levels: Fitness contributes to higher energy levels and better stamina, enhancing the ability to perform daily activities.

2. Enhanced Mobility and Flexibility: Improved flexibility and mobility result from regular exercise, reducing the risk of injuries and enhancing overall physical function.

3. Longevity: Leading a physically active lifestyle is associated with a longer and healthier life.

1.13.1.5 Mental & Psychological Health

1. Mood Regulation: Exercise is demonstrated to have favorable impacts on mood and can help manage conditions like depression and anxiety.

2.Social Interaction: Group exercises or team sports provide chances for social communication,, fostering a feeling of belonging and support

1.13.1.6 Productivity and Performance

1. Increased Productivity: Regular Exercise has been connected to improved focus, productivity, and creativity, benefiting both personal and professional aspects of life.

2. Stress Management: Fitness serves as a constructive outlet for stress, providing individuals with a healthy way to cope with life's challenges.

1.13.1.7 Healthy Aging

1. Bone Health: Weight-bearing exercises contribute to better bone density, reducing the risk of osteoporosis and fractures in older adults.

2. Joint Health: Regular movement and exercise help maintain joint flexibility and reduce the risk of arthritis. It positively impacts general quality of life, mental wellness, and physical health.Including frequent exercise as part of one's routine can result in numerous long term-health benefits.

1.13.2 Components of Fitness

The main components of fitness include:Health-related Fitness Components

1. Body Composition: The proportion of fat and non-fat mass in the body. Achieving a balanced bodily composition involves managing body fat percentage through a mix of proper nutrition and exercise.

2. Cardiovascular Endurance: The heart's capacity,lungs, and circulatory system to supply nutrients and oxygen to the muscles during sustained physical activity. Activities like running, cycling, and swimming improve cardiovascular endurance.

3. Flexibility: The extent of mobility in a joint or set of joints. Stretching exercises, yoga, and Pilates contribute to improving flexibility.

4. Muscular Endurance: The power a muscle or group of muscles to perform repeated contractions over a long time without fatigue. High-repetition weight training and body weight exercises enhance muscular endurance.

5. Muscular Strength: The maximum a muscle or set of muscles can generate during just one contraction. Resistance training and weightlifting are common methods to improve muscular strength.

1.13.2.1 Motor-performance related Fitness Components

1. Agility: Change of direction ability quickly and move the body with precision. Agility is crucial in sports and activities that require quick and coordinated movements.

2. Balance: The ability to maintain stability and control over the body, either in a static or dynamic situation. Balance exercises, such as standing on one leg or stability drills, enhance this component.

3. Co-ordination: Co-ordination is "the capacity to accomplish a motor function using the senses and body parts task". "It may be defined as the capacity of the performer to integrate kinds of motions into particular patterns". High levels of complexity need coordination in their motions. It is the capacity of a performance to incorporate different movement kinds into predetermined patterns. many motions and activities of the body are required for many types of coordination to perform.Co-ordination movements include balance, agility, and speed.

5. Power: The combination of strength and speed, representing the capacity to use force quickly. Plyometric exercises and explosive movements enhance power.

6. Reaction time: Reaction time is the time from the occurrence of the stimulus to the completion of a simple muscular contraction". "Reaction time is the interval of time between the presentation of the stimulus and the initiation of the response.

7. Speed: The ability to move quickly or cover a distance in a short amount of time. Sprinting and specific speed drills are standard methods to improve speed.These components collectively contribute to overall fitness and well-being. A balanced fitness program often incorporates activities that target each of these components to promote holistic health and physical performance**. (Wuest.Bucher-1992)**

1.14 STRENGTH TRAINING

Strength training refers to a form of physical exercise or fitness training that is designed to improve the strength and endurance of muscles. The primary goal of strength training is to increase the amount of force a muscle or group of muscles can

generate against resistance. This variation of exercise involves using resistance, such as weights, resistance bands, or body weight, to induce muscular contractions. **National Strength and Conditioning Association (NSCA).**

1.14.1 Importance of Strength

- Strength increases muscle strength and endurance, enhancing the ability to perform daily tasks, participate in physical activities, and reducing the risk of injuries.
- To improve the ability of muscles to generate force, enhancing overall muscle strength and power.
- It places stress on bones, stimulating the production of bone tissue and improving bone density.
- It contributes to fat loss and improved body composition by increasing calorie expenditure.
- Improved joint stability reduces the risk of injuries, such as sprains and strains, and provides better support for the body's structure.
- Strengthening opposing muscle groups helps maintain proper posture, reducing the risk of musculoskeletal issues

1.15 YOGIC PRACTICE

"Yogic practices" refer to a set of physical, mental, and spiritual disciplines that originate from the ancient tradition of yoga. These practices aim to promote holistic well being by integrating physical postures (asanas), breath control (pranayama), meditation, ethical principles (yamas and niyamas), and philosophical teachings.

Yoga is a multifaceted system that addresses various aspects of an individual's health and consciousness. It is not just a type of physical activity, but a thorough

method of harmonizing the soul, mind, and body.The term “yogic practices” encompasses a wide range of techniques and methods designed to promote physical flexibility, mental clarity, emotional balance, and spiritual growth. **(Patanjali's Yoga Sutras)**

1.15.1 Role of Props in Yogic Practice

A yoga prop is any object that helps to stretch, strengthen, relax, or improve the alignment of the body.That is beneficial to sustain The everyday activities of asanas for a longer duration, and conserves energy.

These props allow asanas to be practised in a relaxed way, balancing the physical and mental actively as well as passively. At first, I would use my own body to support my students during their practice, but found that this exhausted my own reserves of energy. I then began experimenting with ordinary, everyday objects such as walls, chairs, stools, blocks, bolsters, blankets, and belts to help my students achieve the final pose. As I participated with the people who were affected by illness or disease, I came to realize the value of props. I discovered that props helped to retain key movements and subtle adjustments of the body by providing more height, weight, or support. I also found that the use of props improved blood circulation and breathing capacity. This inspired me to create props adjusted to suit individual needs.

The yoga asana practised with props is unique in that That is the only way to work out which allows both action and relaxation simultaneously. It activates the muscles, tones the body's organs, and relieves undue mental and physical stress or strain. Props help to increase flexibility and stamina and, at the same time, relax slack and tired muscles. They help to rejuvenate the entire body, without increasing physical fatigue.

Students of yoga find the practice of asanas with props a very encouraging exercise. It gives them the confidence to attempt difficult asanas, and ensures correct practice. Props provide a sense of direction and alignment, and help to increase and enhance the understanding of each asana. They serve as silent instructors.

Props are tools used in yogic practice to help practitioners achieve proper alignment, deepen their stretches, and provide support during challenging poses. Some common props used in yoga include blocks, straps, bolsters, blankets, and yoga wheels. Here are some ways in which props can enhance a yogic practice:

1. Alignment: Props can help practitioners achieve proper alignment in poses by providing support and stability.

2. Modification: Props can be used to modify poses for practitioners with limited flexibility or injuries.

3. Deepening stretches: Props can help practitioners deepen their stretches by providing additional support or leverage.

4. Restorative practice: Props are often used in restorative yoga practices to help practitioners relax and release tension in the body.Overall, props can be a valuable tool in a yogic practice to enhance alignment, support, and deepen the practice for practitioners of all levels.**(B.K.S.Iyengar, 2001)**

1.15.2 Importance of Yoga for Disability Persons

Yoga can be quite beneficial for people who have disabilities, offering a range of physical, mental, and emotional advantages. Here are a few crucial elements highlighting the importance of yoga suited for those with impairments

1.15.2.1 Physical Well-being

1. Improved Flexibility and Range of Motion: Yoga incorporates gentle stretching and poses that can enhance flexibility, promoting better joint mobility.

2. Strength Building: Many yoga poses involve weight-bearing, which can help to build strength, especially in muscles that might be underused due to a disability.

3. Enhanced Balance and Coordination: Yoga poses often focus on balance and coordination, which can be especially beneficial for those who have mobility challenges,assisting them in enhancing their general stability.

4. Stress Reduction and Relaxation: The practice of mindfulness and deep breathing in yoga can aid in stress reduction, promoting relaxation and a sense of calm. This is especially important as people with impairments may face additional stressors.

5. Pain Management: Gentle yoga practices can contribute to pain management by reducing muscle tension, improving circulation, and promoting a more relaxed state.

1.15.2.2 Mental Well-being

1. Enhanced Mood: Yoga has been connected to improvements in mood and mental well- being. It can be a positive and empowering participation for those who have disabilities, fostering a more positive outlook.

2. Mind-Body Connection: Yoga encourages a strong connection between intellect and mind and body,fostering self -awareness and acceptance

3. Adaptability and inclusivity: Yoga is adaptable to various levels of ability and can be modified to accommodate individual needs. Instructors can tailor practices to suit specific disabilities, making it an inclusive activity.

4. Community and Social Support: Taking part in yoga lessons in groups may foster a sensation of support and community. This social component can be

especially advantageous for those who have impairments, since it gives them the impression that they belong.

5. Improved Sleep: Consistent yoga practice has been shown to be linked to improved sleep quality. Many people who are disabled may experience sleep disturbances, and the relaxation techniques in yoga can contribute to better sleep.

6. Empowerment and Self-Efficacy: Successfully engaging in yoga poses and practices can empower individuals with disabilities, enhancing their sense of self efficacy and accomplishment.

7. Holistic Approach to Health: Yoga encompasses an extensive plan for health, addressing both physical and mental well-being. This comprehensive approach can be especially advantageous for those with disabilities who may face various health challenges.

1.16 OBJECTIVES OF THE STUDY

1. To find out the significance of the training effect of adapted strength training, yogic practices with props and its combination of adapted strength training, yogic practices with props training among Paralympic sitting volleyball players.

2. To find out and measure the importance of the flexibility parameters, namely Hip and Back Flexion, shoulder flexibility.

3. To find out and measure the importance of the strength parameters, namely Abdominal Strength, Shoulder Strength and Grip Strength.

4. To find out and measure the importance of psychological variables, namely achievement motivation, concentration and maintaining confidence.

5. To find out and measure the importance of Anthropometric variables, namely Hand Length, Sitting Back Height and Arm Span.

1.17 REASON FOR SELECTION OF THE TOPIC

The selection of the topic "Combined Effect of Adapted Strength Training and Yogic Practices with Props on Selected Flexibility, Strength Parameters, and Psychological Variables among Paralympic Sitting Volleyball Players" is motivated by the potential to enhance the overall well-being and performance of Paralympic athletes. This holistic approach addresses physical aspects through adapted strength training and yogic practices while considering the psychological variables, aiming to provide a comprehensive and tailored intervention for individuals with diverse abilities participating in sitting volleyball.

1.18 STATEMENT OF THE PROBLEM

The purpose of the study was to find out the combined effect of adapted strength training and yogic practices with props on selected flexibility strength parameters and psychological variables among Paralympic sitting volleyball players.

1.19 HYPOTHESES

It has been scientifically accepted that any systematic teaching over a continuous period of time, would lead to producing changes in training qualities. Based on this concept, the following hypotheses are drawn:

1. It was hypothesized that there would be a significant improvement on selected flexibility parameters, namely Hip and Back Flexion and shoulder flexibility due to the adapted strength training, yogic practices with props training, and combined adapted strength training and yogic practices with props training among Paralympic sitting Volleyball players.

2. It was hypothesized that there would be a significant improvement on selected strength parameters, namely Abdominal Strength, Shoulder Strength, and Grip Strength due to the adapted strength training, yogic practices with props training,

and combining adapted strength training and yogic practices with props training among Paralympic sitting Volleyball players.

3. It was hypothesized that there would be a significant improvement on selected psychological variables, namely achievement motivation, concentration and maintaining confidence due to adapted strength training, yogic practices with props training, and combining adapted strength training and yogic practices with props training among Paralympic sitting volleyball players.

4. It was hypothesized that there would be a significant improvement on selected anthropometric variables namely Hand length, Sitting back height, and Arm span due to the adapted strength training, yogic practices with props training, and combined adapted strength training and yogic practices with props training among Paralympic sitting Volleyball players.

5 . It was hypothesized that the combination of adapted strength training and yogic practices with props group would have better significant improvement on the selected flexibility parameter than the isolated adapted strength training group and isolated yogic practices with props training group among Paralympic sitting volleyball players.

6 . It was hypothesized that the combination of adapted strength training and yogic practices with props group would have better significant improvement on the selected strength parameters than the isolated adapted strength training group and isolated yogic practices with props training group among Paralympic sitting Volleyball players.

7. It was hypothesized that the combination of adapted strength training and yogic practices with a props group would have better significant improvement on the selected psychological variables than the isolated adapted strength training group and

isolated yogic practices with props training group among Paralympic sitting Volleyball players.

8. It was hypothesized that the combination of adapted strength training and yogic practices with props group would have better significant improvement on the selected anthropometric variables than the isolated adapted strength training group and isolated yogic practices with props training group among Paralympic sitting Volleyball players.

1.20 SIGNIFICANCE OF THE STUDY

1. This study would be useful to the physical education teachers and parents to design training programme to improve the health related to physical fitness.

2. This study would be helpful to parents and physical education teachers to understand the effect of adapted strength training and yogic practices with props programme on specific health-related physical fitness and psychological factors Paralympic sitting Volleyball players.

3. This study aims to create awareness and understanding of the Tamil Nadu Para Volley Association among Paralympic sitting volleyball players.

4. This study would help the sitting volleyball players to understand the importance of the effects of adapted strength training and yogic practices with props and its combination of training to improve the health related to physical fitness and psychological variables.

5. This study is an attempt to compare the effect of adapted strength training and yogic practices with props on health related physical fitness and psychological variables.

6. This study would be helpful to the importance of physical fitness activities to avoid health related disorders.

7. This study finding would help to create interest among future researchers to make further studies on this area.

8. The result of the study would help to create a healthy society and a healthy India in the future.

1.21 DELIMITATIONS

As the following areas were the exclusive focus of this investigation:

1. 60 Paralympic sitting volleyball players were selected at random from Chennai, Coimbatore, and Kanyakumari district, Tamil Nadu, India.

2. The age of the subject was between 20 to 40 years only.

3. Adapted strength training and yogic practices with props and combination of both are selected as experimental training.

4. The duration of training periods was given 12 weeks.

The following variables were chosen for this study:

I. Flexibility Parameters

- Hip and Back Flexion
- Shoulder Flexibility

II. Strength Parameters

- Abdominal Strength
- Shoulder Strength
- Grip Strength

III. Psychological Variables

- Achievement motivation
- Maintaining confidence
- Concentration

IV. Anthropometric Variables (Additional Variables)

- Hand Length
- Sitting Back Height
- Arm span

1.22 LIMITATIONS

This investigation was restricted to the subsequent aspects:

1. The regular physical activities of the subjects, past experiences of the subjects were not considered in this study.

2. The socio-economic background, life style, habits the subjects weren't taken consideration for this study

3. The external factors like atmosphere, status of the subject, cultural influences and heredity and environment of the subject were not considered in this study not considered in this study for this study.

4. The other external factors which would have influenced the result of the study were not controlled.

1.23 DEFINITION OF IMPORTANT TERMS

1.23.1 Hip and Back Flexion

"Hip and back flexion refers to the movement of bending forward at the hip joint and the spine, bringing the torso closer to the legs. This movement involves the flexion of the hip joint and the vertebral column". (**Neumann, 2013)**

1.23.2 Shoulder Flexibility

"Shoulder flexibility refers to the range of motion and mobility in the shoulder joint, allowing for smooth and unrestricted movement". (**Michael J. Alter ,2004)**

1.23.3 Abdominal Strength

“Abdominal strength refers to the muscle's capability in the abdomen to produce force and stabilize the core. This is essential for maintaining good posture, preventing injury, and performing various physical activities”. (**Michael Boyle ,2010)**

1.23.4 Shoulder Strength

“Shoulder strength refers to the ability of the muscles surrounding the shoulder joint to generate force and control movement”. (**Shirley Sahrmann ,2002)**

1.23.5 Grip Strength

“Grip strength refers to the ability of an individual to generate force with their hand muscles to hold onto or manipulate an object”.(**Michael Boyle ,2010)**

1.23.6 Achievement Motivation

“Motivation for achievement is the tendency to pursue achievement, endure in the face of setbacks, and gain pride in accomplishments. According to the reality that motivation for accomplishment has been considered a personality factor, sport psychologists have viewed it like personality, progressing from a trait-oriented view of a person's "need for achievement" to an interaction view that emphasis more changeable achievement goals and how these affect and are affected by the situation. Achievement motivation in sport is popularly called competitiveness. In sport and exercise psychology, achievement motivation focuses on self competition, whereas competitiveness influences behaviour in socially evaluative situations” **(Weinberg & Gould, 1995)**

1.23.7 Maintaining Confidence

“Sport psychologists define confidence as a belief that one can succeed doing a desired behaviour. Optimal confidence means being so convinced that one is capable of one's goals that you will strive hard to carry out them. It doesn't imply that

you will always perform well, but it is essential to reaching one's potential. An athlete can expect to make some errors and bad decisions, and might lose concentration occasionally, but a strong belief will help the athlete deal with errors and mistakes effectively and keep striving towards success" **(Terry, 1989).**

1.23.8 Concentration

"It is the mind taking control of one of what appear to be several concurrently potential objects or lines of thought in a clear and vivid manner". **(William james ,1890)**

1.23.9 Anthropometric

"Anthropometric is the measurement of the human body to discover its exact dimensions and the proportions of its parts". **(Yobu A., 2010)**

1.23.10 Hand Length

"The linear distance between the Midstylion and Dactylion sites". **(Marfell - Jones Michael and Others, 2006)**

1.23.11 Siting Back Height

"It is the height of point vertex from the horizontal table top on which the subject sits with his/her legs hanging down while the thighs rest completely on the table top". **(Devinder K.Kansal,2008)**

1.23.12 Arms Span

"He stands erect in standard standing with his arms up extended laterally. Using the anthropometer, measure the horizontal The gap between the tips of the middle fingers of the right and the left hands". **(Yobu A., 2010)**

1.23.13 Yoga

"The Sanskrit word "yoke" or "union" is where the word "yoga" originates. Yoga is traditionally a way of uniting the individual self with the Cosmic

Consciousness, the Divine, or the Universal Spirit. Exercises, both mental and physical, are intended to assist in reaching this objective, which is also known as enlightenment or self-transcendence". **(Stuart Ray Sarbacker, 2005)**

"Yoga is basically a form of spiritual discipline that aims to achieve harmony between the mind and body. It is based on a very delicate science". **(Mohan, 2002)**

1.23.14 Props

"The props shown below support the whole body when you practise the asana, providing you with the height to co-ordinate your movements more effectively, and allowing better balance in the pose". **(B.K.S.Iyengar, 2001)**

1.23.15 Psychology

"Psychology is a science which aims to give us better understanding and control of the behaviour of the organism as a whole". **(William Mc Dougall ,1908)**

1.23.16 Strength

"The most force a muscle is capable of producing. To put it another way, "the capacity of an individual to exert muscular force" is one definition of physical strength".

"Strength is the greatest force that can be applied in a single effort against a resistance". **(Yobu A., 2010)**

1.23.17 Flexibility

"One definition of flexibility is "the range of motion." around a joint as ascertained by the elasticity of the muscles, tendons and ligaments connected to the joint under consideration". **(Devinder K.Kansal, 2008)**