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Physical Education Various Sports Training: A Systematic Review

Dr. S. Karthick

Assistant professor Dhanalakshmi Srinivasan College of physical education, Perambalur, Tamil Nadu, INDIA.

Abstract

Physical Education (PE) is a crucial component in promoting character education, physical health, psychosocial and motor skills. Physical learning activities at school can provide a healthy lifestyle. **Sports Training** for development and performance preparation in team sports such as soccer through played-form activities is getting widely discussed and increasingly recommended in sport organizations at all ages and skill levels.

Continuous training is a type of exercise that involves repetitive movements at a continuous intensity without rest periods.

Fartlek is a running training method that involves alternating between faster and slower running paces. The word "fartlek" is Swedish for "speed play".

Interval training consists of repeated rounds of exercise that can range from a few seconds to several minutes. **Plyometrics**, also known as jump training or plyos, are exercises in which muscles exert maximum force in short intervals of time, with the goal of increasing power (speed-strength). **Circuit training** is a form of body conditioning that involves endurance training, resistance training, high-intensity aerobics, and exercises performed in a circuit, similar to high-intensity interval training. **Conclusion** Enhanced Physical Fitness: Sports training focuses on improving athletes' strength, endurance, speed, agility, flexibility, and coordination.

Keywords: Physical Education, Sports Training, Continuous training, Fartlek training, Plyometrics, Interval training.

Introduction

Physical Education (PE) is a crucial component in promoting character education, physical health, psychosocial and motor skills. Physical learning activities at school can provide a healthy lifestyle. Apart from that, PE activities in schools can also be used to develop 21st century skills. The aspects of 21st century skills, such as critical thinking, teamwork and digital literacy have a significant positive impact on the career readiness of young graduates Forms of 21st century skills include; Critical thinking, cooperation, com- medication and creativity are considered important in today's education. PE has great potential to facilitate the development of these skills through physical activity, sport and play.

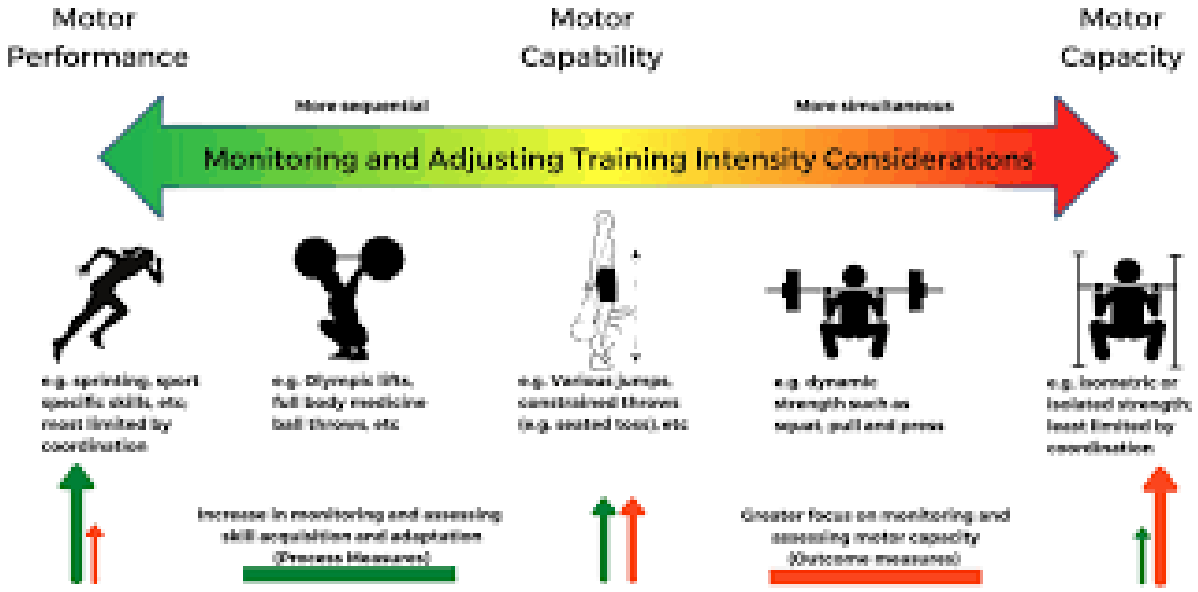
Sports Training

Training for development and performance preparation in team sports such as soccer through played-form activities is getting widely discussed and increasingly recommended in sport organizations at all

ages and skill levels. Evidence suggests that merely constructing training interventions around performance analytics, based on data science reports, is not enough to improve athlete and team performance. Practice made of diverse variants of the original game, namely 'played-form practice', is needed to increase skill adaptation and transferability of game actions, mainly from training to competition.

Here are some common sports training methods:

- **Continuous training**: Develops cardiovascular fitness by running at a steady pace
- **Fartlek training**: Also known as speed play, this method develops a range of components and is often used by game players
- **Interval training**: Alternates between high-intensity exercise and low-intensity recovery periods to develop strength, speed, and muscular endurance
- **Weight training**: Uses free weights or machines to build strength by progressively overloading muscles
- **Plyometric training**: Develops power through explosive movements like jumps and throws
- **Flexibility training**: Develops flexibility through static, ballistic, PNF, and dynamic methods
- **Circuit training**: Combines strength, cardio, and muscular endurance exercises in circuits with short rest periods
- **Exercise classes**: Such as yoga, pilates, body pump, and spinning



Training programs should follow the F.I.T.T. principle, which stands for frequency, intensity, time, and type of exercise.

Continuous training can refer to a type of exercise or a process of ongoing learning:

- **Exercise**

Continuous training is a type of exercise that involves repetitive movements at a continuous intensity without rest periods. It's typically performed at a moderate intensity and involves aerobic activities like running, biking, swimming, or rowing. Continuous training can help you burn fat and lose weight, but it doesn't improve speed or agility.

- **Learning**

Continuous training can also refer to a process of ongoing learning where individuals acquire or update knowledge, skills, and abilities. In the business world, continuous training can help professionals keep up-to-date in their fields and strengthen employability.

Fartlek is a running training method that involves alternating between faster and slower running paces. The word "fartlek" is Swedish for "speed play". Fartlek training is a flexible, unstructured, and creative way to improve your speed, endurance, and cardiovascular fitness.

Here are some tips for fartlek training:

- **Warm up and cool down**: Start with a 5–10 minute warm up and end with a 10 minute cool down.
- **Set a pace**: You can set a timer to notify you to adjust your pace every few minutes.
- **Pick landmarks**: Run to a landmark at a faster pace, then slow down and recover at your normal pace.
- **Vary your pace**: You can try short sprints, walking, running up inclines, or backward running.
- **Listen to music**: You can align your pace changes with the end of each song.
- **Work at 60–80% of your maximum heart rate**: This should mean that you won't experience too much discomfort while exercising.

Fartlek training can be used by runners of all levels, and it can also be beneficial for other athletes, such as those who play soccer, volleyball, basketball, or tennis.

Interval training is a type of exercise that involves alternating between periods of high-intensity exercise and rest or low-intensity activity:

- **Description**

Interval training consists of repeated rounds of exercise that can range from a few seconds to several minutes. During each interval, you work at a set intensity for a specific period of time or distance, and then follow this with a low intensity recovery period.

- **Benefits**

Interval training can:

- Improve cardiorespiratory fitness
- Build strength
- Help you exercise for longer and/or at more intense levels
- Help beginners gradually build their stamina and fitness without overexertion
- **Activities**
- Interval training can be used with many activities, including:
- Running
- Rowing
- Cycling
- Swimming

Tips for beginners

- Start with short intervals (under 30 seconds), fewer repeats, and more rest
- Increase intensity or duration, but not both simultaneously
- Make any changes slowly over time
- A good goal for beginners is to hit a pace that you can sustain for all your intervals

- You can use your heart rate to measure how hard you're working and set up and monitor your intervals.

The basics of weight training

Building and maintaining muscle is necessary for all of us, especially as we age. And the earlier we start the better.

According to the American Council on Exercise, most adults lose nearly a half pound of muscle per year starting around age 30, mostly because they aren't as active as they were when they were younger. Losing muscle at the same time that metabolism starts to slow down is a recipe for weight gain and the health issues that can accompany it.

Building stronger muscles isn't just about vanity, either. According to the Mayo Clinic, strength training not only helps with weight control, but also stops bone loss and can even build new bone.

This can reduce the risk of fractures from osteoporosis. It also improves balance and boosts energy levels.

Plyometrics, also known as **jump training** or **plyos**, are exercises in which muscles exert maximum force in short intervals of time, with the goal of increasing power (speed-strength). This training focuses on learning to move from a muscle extension to a contraction in a rapid or "explosive" manner, such as in specialized repeated jumping.[1] Plyometrics are primarily used by athletes, especially martial artists, sprinters and high jumpers,[2] to improve performance,[3] and are used in the fitness field to a much lesser degree.

Plyometrics include explosive exercises to activate the quick response and elastic properties of the major muscles. It was initially adopted by Soviet Olympians in the 1950s, and then by sportspeople worldwide.[5] Sports using plyometrics include basketball, tennis, badminton, squash and volleyball as well as the various codes of football.[6] The term "plyometrics" was coined by Fred Wilt after watching Soviet athletes prepare for their events in track and field.[7] He began collaboration with trainer Michael Yessis to promote plyometrics.

Since its introduction in the early 1980s, two forms of plyometrics have evolved. In the original version, created by Russian scientist Yuri Verkhoshansky, it was defined as the shock method.[8][9] In this, the athlete would drop down from a height and experience a "shock" upon landing. This in turn would bring about a forced eccentric contraction which was then immediately switched to a concentric contraction as the athlete jumped upward. The landing and takeoff were executed in an extremely short period of time, in the range of 0.1–0.2 second.[9] Explosive plyometrics describes the approach originally created by Verkhoshansky.[3] He experimented with many different exercises, but the depth jump appeared to be the best for duplicating the forces in the landing and takeoff.

The second version of plyometrics, seen to a greater extent in the United States, involves any form of jump regardless of execution time.

Flexibility training is a series of exercises that can help improve your range of motion and reduce your risk of injury. Here are some tips and types of flexibility training:

Dynamic stretching

Combines stretching with movement to improve your range of motion without sacrificing muscle power. Dynamic stretches can help your joints and muscles move more freely during a workout.

Isometric stretching
A type of static stretching that involves tensing the stretched muscles.

PNF stretching
Proprioceptive neuromuscular facilitation, or PNF stretching, increases your range of motion by stretching and contracting the stretched muscle.

Ballistic stretching
A technique that involves gently bouncing back and forth to stretch and relax the muscle.

Hamstring stretch
A stretch that can help with tight hamstrings.
Here are some tips for flexibility training:

- Commit to a stretching routine at least three times a week.
- Don't do intensive stretching every day.
- Strengthen the muscles around the joint to help prevent injury.
- Use light weights and go through the full range of motion.
- Stretch post-workout to maintain full range of motion.

Circuit training is a form of body conditioning that involves endurance training, resistance training, high-intensity aerobics, and exercises performed in a circuit, similar to high-intensity interval training. It targets strength building and muscular endurance. An exercise "circuit" is one completion of all set exercises in the program. When one circuit is completed, one begins the first exercise again for the next circuit. Traditionally, the time between exercises in circuit training is short and often with rapid movement to the next exercise.
The program was developed by R.E. Morgan and G.T. Anderson in 1953 at the University of Leeds in England.[2]

Typical activities in a circuit training
[Edit]
A circuit should work each section of the body individually. Typical activities include:
Upper-body

- Push ups
- Bench dips
- Back extensions
- Medicine ball chest pass
- Bench press
- Inclined press up

Core & trunk

- Sit ups (lower abdominal)
- Stomach crunch (upper abdominal)
- Back extension chest raise

Lower-body

- Squat jumps

- Compass jumps
- Astride jumps
- Step ups
- Shuttle runs
- Hopping shuttles
- Bench squats

Total-body

- Burgees
- Treadmills
- Squat thrusts
- Skipping
- Jogging

There are many types of training exercises, including strength training, aerobic exercise, and at-home workouts:

Strength training

Builds muscle mass and can help with daily tasks. Some examples include:

Push-ups, pull-ups, and squats: Can be done with little or no equipment

Free weights: Use barbells, dumbbells, soup cans, medicine balls, or kettle bells

Resistance tubing: Inexpensive and lightweight tubing that provides resistance

Weight machines: Available at fitness centers and some can be purchased for home use

Cable suspension training: Suspend part of your body while doing body weight exercises

Sit-to-stand: Sit on a chair, lean forward, and stand up slowly using your legs

Aerobic exercise

Can reduce the risk of heart disease, stroke, and other conditions. Examples include:

- Brisk walking
- Swimming
- Jogging
- Cycling
- Dancing

At-home workouts

Some examples include:

- **Donkey kicks**: Build glutes by getting on all fours and pushing your foot out to an imaginary wall
- **Bird dog**: A full-body move that requires balance and stability
- **Forearm plank**: A full-body exercise that requires strength and balance

Conclusion

Enhanced Physical Fitness: Sports training focuses on improving athletes' strength, endurance, speed, agility, flexibility, and coordination. These physical attributes are essential for performing at a high level and reducing the risk of injuries. Supposed performance depends on motor ability and motor skill which are closely related to the sports discipline.

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