
IMPACT OF SPORTS TRAINING ON SKILL RELATED COMPONENTS OF FITNESS AMONG VOLLEYBALL PLAYERS OF KALYAN KARNATAKA RESEARCH PROPOSAL FOR DOCTOR OF PHILOSOPHY IN PHYSICAL EDUCATION

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Abstract: *Physical Exercises for fitness Physical conditioning is essential to a desired level for the development of particular motor qualities, in view of the requirements of the game concerned and also keeping in view the limitation of the sportsman concerned. Conditioning activities are not of the known ways for improving physical fitness. Neiman defines physical fitness as “a dynamic state of energy and vitality that enables one not only to carry out daily tasks, active leisure time pursuits, and to meet unforeseen emergencies without undue fatigue”, but also to avoid hypo kinetic diseases, while functioning at an optimal level of intellectual capacity and experiencing the joy of life (David, 1993).*

Key Words: Sports Training, Skills, Fitness, Players

Introduction

The term fitness includes physical fitness, physiological fitness, mental fitness, and cardiovascular fitness, social and spiritual fitness. Physically fit people are able to withstand fatigue for longer periods and are better equipped to tolerate physical stresses. Hence, both men and women, the young and the old should indulge in sports activities to grow physically fit and healthy. “Physical fitness is the ability of a persons’ body to meet the demands placed upon it by his works, by his way of life, and by eh necessity to meet emergency situations”. The physical activity or fitness is the most important thing to maintain the physical activities in his daily routine and also make able to participate in the sports and games.

According to Bucher: “The fitness is the skill of the person to overcome in the difficult situation and also maintain the balanced life, it is also considered the mental, physical, social, psychological factors which provides the total strength and wellness for the good expression” Fit people make a fit nation. If a person’s body grows soft and inactive and he fails to develop physical promises, he is undermining his capacity for thought for work which is vital to life and society in welfare state. In India adequate emphasis is not laid on the development of physical fitness of the nation. There is a very small percentage of youth who are really conscious about their physical fitness. Today’s youth are tomorrow’s leaders of the nation. They have to man our Government and political parties our laboratories and research establishments industries agricultural products maintain law and order, safe guard our boarders from external aggression and finally keep our nations head high by achieving high sports performance winning medals in the international sports competitions. This can be achieved with dedicated efforts on the part of the individuals, players in any field of work or walk of life. Flexibility, mobility and suppleness all mean the range of limb movement around joints. Some sports such as gymnastics require a great deal of overall body flexibility. Other sports for example javelin require flexibility in particular parts of the body (Paul, 1997). The physical activity or exercise is the

physical activity which boosts the fitness levels of the human body as well as the psychological factors of the body, the fitness exercises producing the better strength capacity, cardio function, using the energy to work and psychological well being among the players. The regular physical activities can increase the good abilities in human body and also has the positive influence on the lower the risk of cardio respiratory, overweight, high blood pressure, sugar level in blood and lower the risks of disabilities in function, it is also motivates the brain to produce the good hormones to maintain the better health. the sports participation or participation in the physical activities can influence on the self esteem among players and also maintain the healthy mind and physical body. .The present world facing the many problems and medical emergency in the cases of overweight among the kids who have never been in the physical activity and busy in the mobiles, gaming which leads health disturbance among them. Many people are using wrong methods to decrease the weight by using drugs. Physical fitness can be best achieved with physical exercise and it is classified as follows depending on overall effect it includes a human body. 1.2 Types of Physical Exercises 1) Aerobic Exercises: It is a physical activity that uses large muscle groups and poses the body to use more oxygen than it would while resting as this oxygen helps in compulsion of bad cholesterol. The fitness abilities of the body can increase by involving the aerobic activities which means with normal physical activities done without any higher pressure it is with oxygen, like jogging, speed walk, swimming, long walk, tracking, playing table tennis other training method which are normal in their intensity. 2) Anaerobic Exercises: It is also called strength or resistance training and can firm strength and tone the muscles and prepares muscles to deposit no or in negligible amount of cholesterol, include bone strength, balance and coordination it includes weight training functional training eccentric training, interval training, sprinting and increased intense interval training increase short term muscles strength. 3) Flexibility: Excess stretch lengthens your muscles. Activities such as stretching helps to increase joint flexibility and keeps muscles lumber. Thus range of muscle is increased which reduces chances of injury. Physical fitness can includes training that focus on accuracy, agility, power, & speed. 4) Balance Body balance, whose goal is to stabilize the body against the law of gravity in both the upright position and during movement, is an important function for human beings. The effectiveness of body balance requires the activities and proper functioning of the vestibular, visual, somatosensory, muscular, and central nervous systems `Physical exercises have been commonly used to improve body balance by employing individual protocols that use resistance exercises such as dynamic and static training or by applying exercises that facilitate adaptation (adjustment of sensory information due to new operating conditions) or habituation (modulation in the vestibular nuclei) to balance disturbances, thus lessening their effects on the body

SPORTS TRAINING Improve physical fitness and provide entertainment to participants. Sport may be competitive, where a winner or winners can be identified by objective means, and may require a degree of skill, especially at higher levels. Hundreds of sports exist, including those for a single participant, through to those with hundreds of simultaneous participants, either in teams or competing as individuals. Some non-physical activities, such as board games and card games are sometimes referred to as sports, but a sport is generally recognized as being based in physical athleticism maintenance and recovery of performance capacity and performance readiness. Physical exercises are the physical means of training. The other means are used in addition to physical exercises or separately as per requirement. Each training means has its own specific effect on the performance capacity. This effect may be direct or indirect. Physical exercises have a direct effect on performance capacity. Means like physiotherapy, autogenously training has indirect effect. Physical training refers to the processes used in order to develop the components of physical fitness, as for example, how to improve aerobic endurance, to strength and relax muscles, to increase arm and shoulder strength, to relate exercises and programmers to the specific requirements or individual sports. On the other hand, sports training aims at achieving high performance in sports competition. In order to achieve high performance, sports training is done in a planned and systematic manner. Sports training is based on

systematic facts and principles. A system most suitable for achieving high performance has to be first made on the basis of the sports training which is planned. It is always assessed, planned, organized and implemented by a coach or a sports teacher or some other person. The sports training aim sat finding out hidden reserves and makes the sportsperson aware of it. It also aims at further development of these reserves. The sportspersons control their day to day routine in such a manner that they are able to do training once or twice a day with high effect. Sports training is basically an educational process. So, it strives to develop all the aspects of personality. It is a continuous process of perfection, improvement and creation of means and methods of improving sports performance and factors of performance. Research on the effect of weight training on health and fitness determinants revealed that weight training, like other types of exercise, positively affects physical performance and body composition and a number of health parameters. Almost every study revealed an increase in muscular strength, whereas the effect on aerobic power is inconsistent and dependent on the type of weight training compared with running and cycling, the weight training induced changes in body composition consist of a larger increase in fat free mass, whereas the decrease in fat mass seems to be somewhat smaller. The modest effect on fat mass might be attributed to the lower energy costs of a single weighttraining workout. The latter finding seems to make this kind of exercise less effective in programs of weight control and weight reduction. Muscle strength is related to the cross sectional area of the muscle. However, this strong relationship diminishes when explosive athletes and endurance athletes are compared. What most studies suggest is that strength is highly related to muscle size. However, people who have a disproportionate amount of fast-twitch fibers will gain strength faster than those who do not. Fast-twitch fibers tend to be stronger than other fiber types, so people who have more of them will tend to be stronger and have greater potential for strength gains.

PRINCIPLES OF TRAINING

Principles of training are the guide-lines for coaches, teachers and sports persons for the formulation and control of sports training. These principles are valid for all aspects and elements of training. These are formed successful practice. The principles of training can be general or specific. General principles are valid for the process of sports training as a whole. The specific principles are applicable to a limited part or aspect of training only. The training should be a continuous and regular process. Continuous and regular training leads to the improvement of performance capacity. The sportsman must be educated about the importance of continuity of training by convincing him about the negative effects of training breaks and irregular training on his performance capacity. The training load is the principal stimulus for starting the psychophysical processes of adaptation which eventually leads to the increase in performance capacity. A quantum of training load forces the organism to adapt to a certain level of psychic and physical demands. If the same load is repeated, it gradually loses its value as a stimulus for adaptation. Higher performance will be achieved when the organism adapts to a higher level of functioning and this is possible only by increasing the load. The training programme should be formulated uniformly but allowing for individual differences. Uniformity means that training for all should be based on the same principles and system which have been worked out to achieve the prognostic sports performance In stages. According to Singh (1984) training aims at improving the fitness of a person and promoting the acquisition of basic movement skills. To achieve this, training should have some basic principles and the most important basic principle of training is overload. Most Physiological systems can adapt to functional demands that exceed these loads encountered in normal daily life. Training often systematically exposes selected physiological systems to Intensities of work or function that exceed those to which the system is already adapted. Excessive overload has to be avoided because physiological system cannot adapt to extreme consistency as most physiological systems require,

COMPONENTS OF TRAINING

Progressive Loading (Overload) Biological systems can adapt to loads that are higher than the demands of normal daily activities. Training loads must be increased gradually, however, to allow

the body to adapt and to avoid injury (system failure due to overloading). Varying the type, volume, and intensity of the training load allows the body an opportunity to recover, and to overcompensate. **Adaptation** Adaptations to the demands of training occur gradually, over long periods of time. Efforts to accelerate the process may lead to injury, illness, or “overtraining”. Many adaptive changes reverse when training ceases conversely, an inadequate training load.

Specificity Energy pathways, enzyme systems, muscle fiber types, and neuromuscular responses adapt specifically to the type of training to which they are subjected. For example, strength training has little effect on endurance. Conversely, endurance training activates aerobic pathways, with little effect on speed or strength. Even so, a wellrounded training programme should contain a variety of elements (aerobic, anaerobic, speed, strength, flexibility) and involve all of the major muscle groups in order to prevent imbalances and avoid injuries.

Reversibility A regular training stimulus is required in order for adaptation to occur and to be maintained. Without suitable, repeated bouts of training, fitness levels remain low or regress to the pre-training levels.

Variation and Recovery Muscle groups adapt to a specific training stimulus in about three weeks and then plateau. Variations in training and periods of recovery are needed to continue progressive loading, without the risks of injury and/or overtraining. Training sessions should alternate between heavy, light, and moderate in order to permit recovery. The content of training programmers must also vary in order to prevent boredom and “staleness”.

Individual Response Each athlete will respond differently to the same training stimulus. There are many factors that alter the training response: genetics, maturity, nutrition, prior training, environment, sleep, rest, stress, illness or injury and motivation, to name a few.

Periodization of the Training Cycle The training programme must consist of a variety of elements, including cardio respiratory (aerobic) fitness, general strength, anaerobic fitness (power), speed, neuromuscular skills development, flexibility and mental preparation. The emphasis placed upon each of these elements must vary during the training year; Skills acquisition should not be emphasized during a high-intensity training cycle, but should be reserved for periods of lower volume and intensity.

Maintenance Gains achieved during high-intensity training periods can be maintained with a moderate level of work. Thus, by means of periodization, some elements can be maintained with less work, while other elements are stressed.

SKILL RELATED FITNESS

Improving your overall fitness can help you no matter what sport or other form of exercise you engage in. But where performance is concerned, the greatest improvements arise from training that develops skills specifically related to your activity of choice. For instance, you need cardiovascular endurance and flexibility to play tennis. But to become good at tennis, you have to work on skill-related fitness components like agility, power, speed, and hand-eye coordination. It's this focus on activity-related skills that differentiate two distinct areas of fitness development. The health-related components of fitness are important for everyone, in all walks of life, regardless of whether they have a desire to compete in or perform a physical activity at an optimum level. They are: Body composition

- Cardiovascular endurance
- Flexibility
- Muscular endurance
- Muscular strength
- When you improve your cardiovascular endurance, you reduce the risk of heart disease.

When you improve your flexibility, you maintain a healthy range of motion, which improves your ability to perform activities of daily living, like picking things up off the floor or stretching to reach items on high shelves. Skill-Related Fitness Components If you're already meeting the ACSM

guidelines and you want to do more to train for a specific fitness-related goal, consider the six skill-related fitness components: Agility

- Balance
- Coordination (hand-eye and/or foot-eye)
- Power
- Reaction time
- Speed

The health components of fitness are universally important. The skill-related fitness components are more relevant to certain athletes. For example, while everyone can benefit from daily walks, someone who hits the path just to get their heart pumping doesn't need to worry about developing the speed necessary to run a five-minute mile.

REVIEWS OF RELATED LITERATURE

Ingrid et al (2012) analyzed the effect of task oriented circuit training compared with usual physiotherapy in terms of self-reported walking competency for patients with stroke discharged from a rehabilitation center to their own home. Patients with stroke who were able to walk a minimum of 10 m without physical assistance and were discharged from inpatient and rehabilitation shifted to an outpatient rehabilitation clinic. Patients were randomly allocated to circuit training or usual physiotherapy, after stratification by rehabilitation centre, with an online randomization procedure. Patients in the intervention group received circuit training in 90 minute sessions twice a week for 12 weeks. The training included eight different workstations in a gym and was intended to improve performance in tasks relating to walking competency. The control group received usual outpatient physiotherapy. The primary outcome was the mobility domain of the stroke impact scale (SIS, version 3.0). Secondary outcomes were standing balance, self reported abilities, gait speed, walking distance, stair climbing, instrumental activities of daily living, fatigue, anxiety, and depression. Differences between groups were analysed according to the intention to treat principle. All outcomes were assessed by blinded observers in a repeated measurement design lasting 24 weeks. 126 patients were included in the circuit training group and 124 in the usual care group (control), with data from 125 and 117, respectively, available for analysis. One patient from the circuit training group and seven from the control group dropped out. There were no significant differences between groups for the stroke impact scale mobility domain ($\beta=0.05$ (SE 0.68), $P=0.943$) at 12 weeks. Circuit training was associated with significantly higher scores in terms of gait speed (0.09 m/s (SE 0.02), Reddy (2012), compared the Circuit Training Methods on Performance Variables of SC/ST Non-SC/ST Boys. For his study 30 SC/ST students and 30 non-SC/ST students were selected. Then 30 SC/ST students were divided into three groups, named as Continuous Circuit Training Group (CCT), Interval Circuit Training Group (ICT) and Control Group (CT). Another 30 non-SC/ST students were divided into same like SC/ST group. After dividing into six groups, experimental treatments i.e. Continuous Circuit Training Method and Interval Circuit Training Method were applied to CCT and ICT groups only. Criterion measures were 50m run, shuttle run, standing broad jump, cooper's 12 minutes Run and walk and 800m run for middle distance running performance. Treatments were applied 3 days per week for 8 weeks only. The subjects were tested pre-test and post-test. After collection of Pre-test and Post-test scores I analyzed scored results, collected from different groups by using statistical methods and the results are presented in this article. Babalola (2011) carried out to examine the responses exhibited by University of Ibadan racket game athletes concerning their physiological and performance characteristics following an 8-week circuit training programme. Multistage sampling technique was used to select 32 participants. The subjects were randomly selected (male and female) from four strata that made-up racket games in the University. Those were: Badminton, Table tennis, Tennis and Squash. The subjects underwent training twice a week, for eight consecutive weeks. A single group quasi experimental design, otherwise known as repeated measure design was used for the study. Data collected were analyzed using descriptive statistics of mean, range and standard

deviation for interpretations of research questions, while inferential statistics of paired t-test was adopted to confirm the significance of the stated hypothesis at the 0.05 level of significance. The results show that there was significant difference in the pretest-posttest responses of physiological variables measured (Resting diastolic and systolic blood pressure RDBP & RSBP, resting heart rate RHR and Body Mass Index BMI). The differences recorded for the performance characteristics of speed and agility was not significant. However, measurements of cardio respiratory endurance, general muscular endurance, arm muscular strength and flexibility showed statistically significant differences. It was recommended that racket games coaches and players should adopt regimental field training programme and engage in strenuous physical training to achieve better body compositions suitable for competitive engagement in their various sports

RESEARCH METHODOLOGY

Statement of the problem The research study Entitled “Impact of sports training on skill related components of fitness among Volleyball Players of Kalyan Karnataka” **Significance of the study** The present research study focused on the impact of fitness training on the skill related components of fitness among Volleyball Players in Kalyan Karnataka region, the research study will conduct for seven weeks fitness training for volleyball players, the skill related components will be measured in pre and post tests, the data compare with each other to find out the significance difference between fitness training group pre and post data of the study, 100 male players will be selected as the sample of the present study, the researcher conduct the pre test of skill related components of fitness and recorded, after seven weeks fitness training again he conduct the post test on the skill related components of fitness e.i. Agility, speed, power, balance, coordination of volleyball players. All standard and scientific testing tools will be used in the research study. The collected data will scrutinized and tested through the SPSS software to get research results. **The objectives** To tests the skill related components of fitness of Volleyball Players of Kalyan Karnataka region To conduct the sports training to develop the skill related components of fitness for sample groups of the research study To conduct the post test to measure the impact of sports training on the skill related components of fitness of Volleyball Players To compare the pre and post skill related components of fitness level Hypothesis of the study There would be influence of sports training on skill related components of fitness of Volleyball Players of the present study, There would be influence of sports training on the skill related components of fitness I.e, Agility, speed, power, balance, coordination and reaction time among Volleyball Players of the research study There would be positive impact of sports training on the skill related components of fitness of sample group **Sample** Total one hundred volleyball players will be selected in simple random method from Kalyan Karnataka region and conduct the pre test of skill related components of fitness test than conduct seven weeks sports training again conducted the post test on same sample of the study.

Conclusion:

Variables of the study Independent variables Sports training (circuit training) Dependent variables Skill related components of fitness like, I.e, Agility, speed, power, balance and coordination, **Research tool** Sports training methods for six weeks session Circuit training for 7 weeks morning and evening scheduled 2 hours every day. Other basic fitness training also used in the training session. **Measurement tools of skill related components** Agility 4*10 meters test speed, 50 meters dash power, Vertical jump balance, Flamingo balance test coordination Stick flip test **Statistical tools** Mean Standard deviation T test SPSS software will be used to calculate the data and results of the research study.

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