A Study on Effectiveness of Exercises on Motor Fitness and Football

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Abstract – Physical fitness is a state of well-being that comprises skill and health-related components. Fitness is a condition in which an individual has sufficient energy to avoid fatigue and enjoy life. It is necessary for elderly people to maintain and improve their physical fitness in order to satisfy healthy, high quality of daily life.

INTRODUCTION

Yogic practices getting popular are looked upon. It's systematic for the improvement of physical fitness of an individual. Yet we lack in the experimental evidence about the utility of physical exercise and yogic exercises for promoting physical fitness. Despite this fact many people misunderstand yoga even in India. If we were to take a cross-section of society and make a general survey of the public's opinion about yoga we would find many misconceptions about yoga.

In order to bring yoga to life and to really gain profit by it one must take it to heart in every sense of word and live it as an essential part of one's daily life. Football is perhaps the most demanding of all sports. In the modern game (at any level) football, training and conditioning is essential. Few sports are played on a large playing field, lasting as long and without regular rest periods. Players cover 8- 12km during a match, consisting of 24% walking, 36% jogging, 20% coursing, 11% sprinting, 7% moving backwards and 2% moving whilst in possession of the ball. Football (also known as association football or soccer) is a team sport played between two teams of 11 players each. It is widely considered to be the most popular sport in the world. Football is a ball game, which is played on a rectangular grass field, or occasionally on artificial turf, with a goal post at each end of the field. The objectives of the players is to score by maneuvering the ball into the opponent goal only the goalkeepers may use their hands or arms to propel the ball in the marked area in general play. The team that scores the most goals by the end of the match wins. If the score is tied at the end of the game, either a draw is declared or the game goes into extended time depending on the format of the competition.

Yoga is a systematic discipline originated in India, for self- realization. However, now a day scientific researchers find its utility for all round development of personality along with innumerable spiritual as well as therapeutically applications. As per Indian tradition Yoga, especially Hatha yoga, comprises of different yogic exercises viz., asana (body postures), pranayama (controlled regulation of breath), bandha (physiological locks or holds of the semi- voluntary muscles), kriyas (cleansing process), and mudras (attitude which spontaneously arouses meditation). Swami Kuvalayananda, the father of scientific research in Yoga and founder of Kaivalyadhama (India), has constructed the curriculum of yogic exercises to maintain health and fitness. Yogic exercises are also becoming popular in the area of games and sports and also in the curriculum of Indian schools, colleges and universities.

Football is probably the most popular game worldwide but there is still limited scientific information available concerning the physique and performance qualities of elite Indian footballers. Not many sports physiologist have been attracted to examine the footballer in details because of the lack of adequate experimental models to study the games in the laboratory (Reilly et al, 1990). The game comprises activities like sprint and jumps in attack and defense. It also requires aerobic capacity as the game lasts one and half hour, sometimes even longer than the official time. These short and long lasting activities are performed over the entire game, so, both aerobic and anaerobic capacities are very important to exhibit better performance.

REVIEW LITERATURE:

The contemporary status of research on physical fitness is an outcome of the vast literature available on physical fitness: comparison of physical fitness with other aspects, factor analysis of variables representing physical fitness, multiple correlation and regression analysis with the developed criteria and so on. This study involves the literature pertinent to the construction and standardization of specific physical fitness test for soccer players, yet, pertinent literature, and though peripheral to physical fitness, deemed to be relevant and that which are effective for the meaningful study was also incorporated.

A sincere and exhaustive attempt has been made by the researcher to present in this study some relevant and useful studies and references covering different areas after exploring all possible sources and the findings and conclusions of those studies and references have been carefully extracted and cited below in order to make a comparison with the present study and interpretation thereon.

This study intends to establish norms of a "selection criteria" for composing a standard football team. In this study, the investigator has reviewed the literature and found that there are very limited reports available in football game. The investigator has summarized few of them.

Michale explored the possibility of developing a regression equation whereby Football ability could be predicted from an analysis of selected anthropometric measures, strength tests, power measures, balance, standing height and body weight. Subjects were fifty-six scholarship football players at University of Arkansas. Six assistant football coaches, three offensive and three defensive, rated each offensives and defensive player respectively this rating in football ability was used as the criterion measure. Stepwise multiple regression and polynomial regression were utilized to form predictive equations.

The equation by polynomial regression was Football ability = 787.65 + 7.33 (bow Legs) - 143.22 (standing height) - 2.60 (tibial torsion) - 33.40 (horse power) -0.408 (body weight) R2 = .573 and percentage standard error of the estimate was 15.7 percent.

Mc David predicted the football potential of sixty seven football players from their score on a football potential test. The test battery consisted of motor ability items as well as football skill items (power, strength, agility, speed. Mc Cloy's classification index, time to hit, and audio visual work out- put). Substantial corrections were obtained between most test items and the test criterion, the sum of X scores, size, as depicted by Mc Cloy's classification index, has a negative non significant correlation with the criterion. The discriminative power of the battery was evidenced by the highly significant correlation between the test criterion and the coach's ranking of individual players. It was concluded that athletic potential in football can be predicted by testing.

Christian studied the contribution of selected variables to college football performance thirty members of South-Eastern State Collegiate Football Teams were selected for this study. From the multiple correlation coefficients it was found that the best predictor of the game percentage for backs was lateral movement. For the line, the best predictor of the game percentage score was bench step. When he combined the groups, the best predictor of the game percentage score was the vertical jump and also the 12- minute run.

Eaton has conducted a study to examine the criteria of football offences. The study examined the criteria upon which twenty one Massachusetts high school football coaches built their offences. It was concluded that speed, ball control, simplicity, balance, deception, power, player's confidence and timing must be made as basic criteria to be considered for the long gain, balance of offensive and defensive style, quarter back training and blocking angles.

Carter has conducted a study of somato type of college level football players. The findings have indicated that there were somato types and size difference between playing position and between players at different college level. Some somato type which are rare in general population are common in football players. The dominant physique in the study was the extreme endomorphic, mesomorph gross size is an outstanding characteristic of football players.

RESEARCH METHODOLOGY:

The contemporary history of the world's favorite game Football spans more than 100 years. It all began in 1863 in England, when rugby football and association football branched off on their different courses and the Football Association in England was formed – becoming the sports' s the first governing body.

Both codes stemmed from a common root and both have a long and intricately branched ancestral tree. A search down the centuries reveal at least half a dozen different games, varying to different degrees, and to which the historical development of football has been traced back. Whether this can be justified in some instances is disputable. Nevertheless, the fact remains that people have enjoyed kicking a ball about for thousands of years and there is absolutely no reason to consider it an aberration of the more natural form of playing a ball with the hands.

On the contrary, apart from the need to employ the legs and feet in tough tusssels for the ball, often without any laws of protection, it was recognized right at the outset that the art of controlling the ball with the feet was not easy and, as such, required no small measure of skill. The very earliest form of the game for which there is scientific evidence was an exercise from a military manual dating back to the second and third countries BC in China.

This Han Dynasty forebear of football was called Tsu'Chu and it consisted of kicking a leather ball filled with feathers and hair through an opening, measuring only 30 – 40 cm in width , into a small net fixed onto long bamboo canes. According to one variation of this exercise , the player was not permitted to aim at his target unimpeded, but had to use his feet , chest, back and shoulders while trying to withstand the attacks of his opponents. Use of the hands was not permitted.

Another form of the game, also originating from the Far East , was the Japanese Kemari ,which began some 500-600 years later and is still played today. This is a sport lacking the competitive element of Tsu' Chu with no struggle for possession involved. Standing in a circle , the players had to pass the ball to each other , in a relatively small space , trying not to let it touch the ground.

The Greek 'Episkyros' – of which few concrete details survive – was much livelier, as was the Roman 'Harpastum'. The latter was played out with a smaller ball by two teams an a rectangular field marked by boundary lines and a center line. The objective was to get the ball over the opposition's boundary lines and as players passed it between themselves, trickly was the order of the day. The game remained popular for 700-800 years, but, although the Romans took it to Britain with them, the use of feet was so small as to scarcely be of consequence.

STATISTICAL ANALYSIS:

Software, SPSS (Ver. 9.0) was used to analyze the collected data. Mean, standard deviation and one-way ANOVA were performed to see whether any significant differences among footballers and also according to their playing positions. After completion of the one-way ANOVA, Scheffe's F test was also used for multiple comparisons between clubs. Software, SPSS (Ver. 9.0) was used to analyze the collected data. Mean, standard deviation and one-way ANOVA were performed to see whether any significant differences among footballers and also according to their playing positions. After completion of the one-way ANOVA, Scheffe's F test was also used for multiple comparisons between clubs.

After step wise data collection, they were processed through a series of statistical analysis. The descriptive statistics of the collected score was done. The mean, median and standard deviation was calculated. To find out the normality of the scores the skewness and the kurtosis were found out. Some of the scores from the data were removed as they were outliers. The outliers were found with the help of Box plots through SPSS. The Percentile method was used to create norms. The present norms of 12 finally selected test items indicate that the distribution of scores of almost all the test- items resides in the normal range of probability curve. The raw data was further converted into standard scores for the combining or comparing scores.

RESULT:

1. Training content which in its structure contains exercises of acyclic character should be represented in the training process because they largely contribute to the development of cognitive abilities (above all perceptive), which is very important for young soccer players; then, training content of soccer aerobic, exercises for leg work and for general movement technique, all in the function of optimal development of young soccer players. These exercises will certainly contribute to the development of specific coordination in young soccer players.

2. Agility is considered an essential element for athletic success, yet it remains one of the most under researched areas of sports performance. Basic movement structures which are of vital importance for successful participation in any sport. If the movement technique is better, the athlete achieves better effects of a training process and is more effective in competition.

3. We are also of opinion that further advancement of technical preparedness is not possible without parallel development of basic motor abilities;

4. In this study there were detected the abilities of most influence on improving results in tests of motor abilities; such information can contribute to selecting the training assessment that would apply to working with young soccer players.

At the end we have to say that excellent success is only possible if the athletes' preparation process and sport itself are based on scientifically founded tendencies, and this is probably the only and the right way in guiding our league competition towards contemporary attainments of the soccer game. Ultimately, it is also likely that effective training procedures to improve motor fitness that Footballers made the biggest progress.

Significant differences were found between the individual and team games athletes on selected physical fitness

variables. Findings of this exploratory study suggest that the players of individual and team games differ significantly in relation to physical fitness variables.

Further investigations are needed on the above studied variables along with physiological variables to assess relationships among them and with performances in team games and individual games football. The information derived from this study will not only serve scientists and coaches in their selection of young athletes, but provide guidelines for training programs for individual and team games football.

To conclude, a well-known, age-dependent development pattern in physical fitness and in football skills among adolescent football players was found in the present study. Although general and football-specific perceptual motor skills also developed with age, it seemed that football specific perceptual skills became more important with age and general perceptual motor skills less important. Nevertheless, more research is warranted in order to understand the development of general and football-specific perceptual motor skills during growth. In addition, research lay-out in the football-specific laboratory test used in the present study was very simple compared to those situations that players have to face in the real game. Football-specific laboratory test involved some uncertainty compared to traditional football skill tests but was still a test from predetermined start to pre-determined finish. In real game each player possess unique starting situation which is then followed by decisions and motor actions affected by the actions of teammates and opponents. Decisions and actions in the game are also influenced by the team`s playing style and tactics selected. Therefore, more research is also needed in order to develop tests that measures essential football skills in more game-like simulation or even in the game itself.

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