SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

Training: The word ‘Training’ has been a part of human language since ancient times. It denotes the process of preparation for some task. This process invariably extends to a number of days and even months and years. The term ‘training’ is widely used in sports. The regular and systematic use of physical exercise, however, does not guarantee maximum improvement in performance. The effect of these exercises is increased or decreased by a multitude of factors.

Endurance: Endurance is a very important ability in sports. Endurance is the product of all psychic and physical organs and systems. No other motor ability depends so much on the working capacity of complete psycho-physical apparatus of humans as endurance. All other performance factors depend on one or more parts of this psycho-physical apparatus and as a result are directly or indirectly affected by endurance.

Volleyball is an Olympic team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules.

The complete rules are extensive. But simply, play proceeds as follows: A player on one of the teams begins a 'rally' by serving the ball (tossing or releasing it and then hitting it with a hand or arm), from behind the back boundary line of the court, over the net, and into the receiving team's court. The receiving team must not let the ball be grounded within their court. They may touch the ball as many as three times. Typically, the first two touches are to set up for an attack, an attempt to direct the ball back over the net in such a way that the serving team is unable to prevent it from being grounded in their court.

The rally continues, with each team allowed as many as three consecutive touches, until either (1): a team makes a kill, grounding the ball on the opponent's
court and winning the rally; or (2): a team commits a fault and loses the rally. The team that wins the rally is awarded a point, and serves the ball to start the next rally. A few of the most common faults include:

- causing the ball to touch the ground outside the opponents’ court or without first passing over the net;
- catching and throwing the ball;
- double hit: two consecutive contacts with the ball made by the same player;
- four consecutive contacts with the ball made by the same team.
- net foul: touching the net during play.

The ball is usually played with the hands or arms, but players can legally strike or push (short contact) the ball with any part of the body.

A number of consistent techniques have evolved in volleyball, including spiking and blocking (because these plays are made above the top of the net the vertical jump is an athletic skill emphasized in the sport) as well as passing, setting, and specialized player positions and offensive and defensive structures.

Pranayama (Devanagari: प्राणायाम, prāṇāyāma) is a Sanskrit compound. V. S. Apte provides fourteen different meanings for the word prana (Devanagari: प्राण, prāṇa) including these: Breath, respiration, the breath of life, vital air, principle of life (usually plural in this sense, there being five such vital airs generally assumed, but three, six, seven, nine, and even ten are also spoken of) Energy, vigor, the spirit or soul

Present study is an inspiration to do something for the volleyball players. The rationale behind the formation of hypothesis is that the training in pranayama will subside the ailments of the body at the same time enhances the system functioning, on the same base considering the development of endurance of the sportsman through pranayama. It is always noticed that the performance in any sports is enhanced through the supplements in the form of nutrition, training and massage manipulations. To overcome the performance hindrance caused through
endurance in volleyball a new training method is implemented and the results are drawn. The confidence level of the players is seen definitely increased through the development of endurance.

The need of these players is proper guidance, nurturing and exposure of optimum things at right time and age and the affection, understanding about their feelings. To excel in sports one is expected to have all the innate physical, physiological, psychological, sociological qualities not in normal, but in higher qualities. The idea of considering volleyball subjects is that they possess all the qualities required to excel in sports except capability of endurance and skill which is of most importance for volleyball.

Growth and development in any creature on earth is inevitable and is a lifelong process. In this study specific qualities in endurance abilities are considered which are trained through pranayama to different groups along with the traditional endurance training methods as continuous training method and interval training method. The comparison is made to show that the development of endurance is seen better in the players whose training included pranayama along with the traditional endurance training methods and volleyball.

The subjects were randomly selected from the college. The endurance ability tests were administered primarily and after a gap of every month till six months between the age groups of 18 to 25. The raw scores were then statistically analyzed and compared for interpretation. It was noticed that there is no significant difference in different groups’ viz. (1) Continuous Training + Pranayama + Volleyball (2) Continuous Training + Volleyball (3) Interval Training + Pranayama + Volleyball (4) Interval Training + Volleyball (5) Only Volleyball.

Few similar studies were conducted at various geographical areas. Few difficulties on ground and with management of college were faced by the researcher during the study. Based on the result of this study, a training methodology can be established for volleyball players. The results of the study can
be implemented for the alterations of psychological mind set like pessimism, inferiority, reactionary of volleyball players towards facing the complexities, reconstructing pessimism and developing confidence. The details of the purpose, objectives, significance, hypothesis, limitation, delimitations, required definitions, methodology, analysis, interpretation, conclusion, recommendations and suggestions are detailed logically.

In this research several facets of the endurance development of players from 18 to 25 years are covered. Problems and procedures of testing are discussed. The inter-relationships between endurance tests scores is explored, including a review of the findings of some factorial studies carried out within recent years. The manners in which endurance proficiencies improve as players are supplemented with pranayama are compared among themselves.

CONCLUSION

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through continuous endurance training method in experimental group of volleyball players when compared to the control group, hence Hypothesis: 01 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through interval endurance training method in experimental group of volleyball players when compared to the control group, hence Hypothesis: 02 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters
Run, and Harvard Step Test, displays significant difference of development of endurance through continuous endurance training method supplemented with pranayama in experimental group of volleyball players when compared to the control group, hence Hypothesis: 03 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through interval endurance training method supplemented with pranayama in experimental group of volleyball players when compared to the control group, hence Hypothesis: 04 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through continuous endurance training method supplemented with pranayama in experimental group of volleyball players when compared to the experimental group imparted with only continuous endurance training method, hence Hypothesis: 05 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through interval endurance training method supplemented with pranayama in experimental group of volleyball players when compared to the experimental group imparted with only interval endurance training method, hence Hypothesis: 06 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays insignificant difference of development of endurance through continuous endurance training method supplemented with
pranayama in experimental group of volleyball players when compared to the experimental group imparted with interval endurance training method supplemented with pranayama, hence Hypothesis: 07 is rejected.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through continuous endurance training method supplemented with pranayama in experimental group of volleyball players when compared to the experimental group imparted only interval endurance training method, hence Hypothesis: 08 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays significant difference of development of endurance through interval endurance training method supplemented with pranayama in experimental group of volleyball players when compared to the experimental group imparted with only continuous endurance training method, hence Hypothesis: 09 is accepted.

From the above tables the values of the Mean, Median, Mode and Standard Deviation of Canadian Fit Test, Cooper Test, Metabolic Equivalent, 800 Meters Run, and Harvard Step Test, displays insignificant difference of development of endurance through only interval endurance training method in experimental group of volleyball players when compared to the experimental group imparted with only continuous endurance training method, hence Hypothesis: 10 is rejected.

It is observed that the endurance developed through various training methods along with pranayama in the volleyball players is observed that there is significant difference between the experimental and control group, moreover the difference in two different endurance training methods is found to be insignificant.
Insignificant difference in the training methods along with pranayama is observed among the different experimental groups of the volleyball players between 18 to 25 years of age.

RECOMMENDATIONS

To successfully implement the endurance training methods in the volleyball players in those which are established in the training methods, but if the training methods are supplemented with pranayama it will not only serve the development of cardio-vascular system, but also enhances health and mental aspects of the human being.

1. To successfully modify the motor behavior of children, one should be aware of the complexities of human development and the numerous variables that modify the development.
2. Efforts should be made to delineate the manner in which individual differences in population of children may be affected. It is possible that the child from the higher-income home or from good background may benefit more from increased exposure to motor activities than the child from the lower income home.
3. Increased attempts should be made to incorporate a number of sensory stimulations into programs for the young.
4. Fitness is likely to improve and with it the opportunity to enjoy life more fully where activities are physically demanding; motivation is likely to be heightened where feedback is immediate and success obvious to both performer and those who watch; and a more active leisure life, more chance to enjoy life is likely where activities can be linked to those of the wider community.

Early Childhood Stage- Up to Age 6: Implication for the Children
1. Provide ample opportunities for motor skills development in a variety of situations as these will play an important role in the child’s sport performance capacities in the future.

2. Make sure to use movements appropriate to the child’s maturity level, as some have not developed sufficient motor coordination and control successfully performs fundamental motor skills.

3. Make sure to make room for individual differences by individualizing instruction whenever possible.

4. Do not emphasize the standards / outcomes of performances. Provide a variety of motor experiences with an emphasis on kinesthetic experiences, e.g., “getting to know your body and its parts in space” as these motor experiences are of great value in helping youngsters to refine their neuromuscular control. Note that motor development is related to the rapid growth of the brain at early childhood stage. Focus should be laid on gross motor activities.

5. Combinations of fun forms of training should be used while at the same time introducing the acceptance of certain training rules. Rapid physical changes parallel rapid skill development, therefore continual skill development challenges (varied environment) need to be provided.

6. Note that, skill acquisition is not only the result of teaching but is also the result of environmental opportunity interacting with the maturing bodies. Provide activities that focus on using body positions that require control of body weight in a variety of postural positions.

7. Be aware that varying limb lengths and weights may affect balance, momentum and potential speed in ballistic and dynamic skills.

8. Activities using muscular strength and endurance are important to enhance a child’s level of fitness. These activities should be varied, be kept simple and enjoyable (i.e., running, bicycling, swinging on bars, lifting objects) and be monitored at all times. Keep the activities simple and monitor the growth as well as the effort level at all times. Monitor for recurring soreness by keeping log of complaints.

9. For the child, anaerobic endurance training, eliciting the ATP-PC complex, should involve activities requiring effort and repetition that do not exceed 8-10
seconds. An intense activity of maximal duration of 20 sec. (i.e., sprint) is good to train a child’s anaerobic endurance. However, numerous repetitions of this effort level should be avoided particularly if recovery periods are too short. A maximum of 5-10 repetitions of 20-second sprints and 40 second recovery is recommended. Sports such as hockey and soccer for boys, swimming, bicycling and skating for girls are good activities for anaerobic and aerobic endurance training.

10. Introduce fun stretching and make it an integral part of regular training. Include movements that enhance body awareness (knowledge of the body parts, knowledge of what the parts can do and knowledge of how to make them do it), spatial awareness (knowledge of self-space, general space and restricted space), directional awareness, and temporal awareness. Focus on the different sensory modalities (i.e., sight, sound, touch) in the movement experiences, such as rhythmic exercises.

11. Children should be engaged in object handling (ball) activities and games of obstacle agility races. They should generally engaged in activities that demand visual focus and recognition of imminent changes (direction, shape, size, height, width, etc.) in reference points.

12. Do not stress coordination in conjunction with speed and agility. Demonstrate games and skills by using figures / pictures.

13. Emphasize the development of directional extremes by incorporating them in playful activities. Use a variety of different objects during games and activities. Incorporate bilateral activities (skipping, galloping, hopping) after unilateral movements are fairly well established.

14. Provide regular stimulus for both sides and monitor use of hand and leg preference. Use analogies to explain games and activities. Include games that use analogies to movement patterns from nature, i.e., walk like an elephant.

15. Ensure that all activities are presented in a fun and playful context.

16. Provide cognitive / emotional challenges through relaxation, energizing, imagery and the use of other mental skills as they often help with the development of attention skills and control, which subsequently enhances self-confidence.
17. Experimentation should occur in different environments. Children should be encouraged to initiate activities on their own. Reinforce for initiative / assertiveness. Teach “approach-success” versus “avoid-failure”.

18. Emphasize positive mindset, attitude and focus. Use a problem-solving approach that permits a variety of “correct” solutions by children. Individualizing instruction is a way of ensuring success.

19. Ensure the development of a positive self-concept, as it will establish a sense of security in the child.

20. Provide opportunities in which children can express their autonomy in a reasonable and proper manner (involve them in decision-making, let them choose some activities and work on their own with close supervision).

21. Be aware that children of early childhood age already understand what feelings and emotions are and may use emotion to manipulate adults in order to get what they want. Discuss basic human emotions (i.e., fear, anger, disgust / contempt, surprise, sadness, happiness, interest) and effective responses to them.

Pre-Pubertal Stage – Age 6 to 11 years: Initiation

1. Fundamental movement abilities (walking, running, jumping, throwing, catching, striking, bouncing, hopping, galloping, skipping, climbing) should be well defined at the beginning of this stage.

2. Provide opportunities to refine a variety of movement patterns involving coordination and balance. Climbing and hanging activities are very helpful in developing the upper torso.

3. Help children make the transition from the general movement phase to the specific movement patterns. Begin to stress accuracy, form and skill. Provide many opportunities for practice, encouragement and selective instruction.

4. The training method that is most suitable for developing speed is one that involves repetitions (short distances, brief series of rapid movements, etc.). Systematic speed training is possible as long as sufficient recovery periods are allowed, in order to avoid fatigue and most importantly to avoid an increase in lactic acid (therefore avoid training speed endurance at this stage).
5. Since growth is steady and gradual, training loads can be increased accordingly, playing close attention to signs of overload (i.e., injuries, discomfort and difficulty keeping up).

6. Gross motor skills should be accentuated. Use whole-part-whole approach to learning individual joint actions as well as whole gross movement patterns. There should be a limited amount of weight lifting exercises. Use body weight to develop strength and involve children in some resistance work such as stretching with surgical tubing and calisthenics.

7. Close supervision of resistance activities mainly for technique and endurance are desirable.

8. Design practices to lessen impact forces by first using activities that require controlling body weight by ‘dropping into bent positions’ from straight positions without impact.

9. Follow-up on signs of discomfort, this may be overlooked by youngsters, who are motivated and focused on competing. Avoid repetitive heavy loading of the musculoskeletal system with external weights.

10. Activities and games that require short bursts of speed should be emphasized. Specific exercises focused on endurance, involving the arms, shoulders, abdominal and lower back muscle groups will initiate the future specificity demands of games. These activities can often be incorporated into games-specific games.

11. Girls should practice basic dance / ballet posture training, maintaining flexibility training (active and passive). Include daily flexibility training of all major joints of the body (i.e., hip and shoulder joints). Concentrate on good form. Teach the “stretch” and “relax” technique.

12. Ensure a proper warm-up and an active cool down. Emphasize and monitor post-workout stretching to facilitate recovery and develop / maintain flexibility when muscles are warm and responsive. Instruct children to focus on stretch sensations, which are to incorporate feeling in their stretching by imagining it getting longer.
13. Normal play activities, including collective sports constitute an excellent form of aerobic endurance training. Coaches should not expect children’s gains in aerobic capacity to be the same as those of older children/adolescents.

14. For the child, anaerobic alactic endurance training, which solicits the complex ATP-PC, should involve activities requiring effort and repetition that do not exceed 8-10 seconds. An intense activity of a maximal duration of 20 seconds (i.e., sprint) is good to train a child’s anaerobic lactic endurance because very little lactic acid is produced. However, numerous, repetitive activities of this effort level should be avoided, particularly if recovery periods are too short, because this would increase the production of lactates.

Early Pubertal Stage: Age 11 to 13 years: Implication for the Children

1. Emphasize on physical, aesthetic, kinesthetic and technical preparation.

2. Begin individualization of strength training, as it diminishes the risk of skeletal overuse injuries.

3. Provide specific strength and power training on gym simulators (progressive resistance and specificity). Plyometrics can become a more intricate part of training along with body weight exercises.

4. Young adolescents should proceed with caution and be closely supervised when using weight training to improve strength as they are susceptible to musculoskeletal injuries and also peer pressure, which can lead to games of trying to outperform one another. Be cautious with repetitive heavy loading of the musculoskeletal system.

5. There should be monthly recording of height and leg length (sitting height and standing height).

6. During the period of maximum growth, it is critical that an increased caloric intake, above what is required for activity and maintenance, be available to allow optimal growth.

7. Education about nutrition, obesity and weight control should be routinely provided to players.

8. As early as 10-11 years of age, introduce aerobic/anaerobic interval workouts (progressive training impulses with recovery intervals) as they prevent
boredom, improve focus, teach mental toughness and also upgrade the quality of training.

9. At low intensity training periods, training should be geared towards aerobic exercises, such as aerobic interval training e.g., running 400-800 meters with four minutes rest for three to five repetitions and other sub-threshold aerobic fitness sports.

Late Pubertal Stage – Age 12 to 14 Years: Implication for the Children

1. Be aware of fluctuating skill characteristics and ‘weak’ performance.
2. Care must be taken to maintain relative strength and muscle balance.
3. Training of both agonist and antagonist muscle groups should be emphasized. Greatest strength gains should be expected during this period.
4. Introduce strength training for specific sports specific movement skills.
5. Increase the volume of speed-strength and endurance-strength training in the later years.
6. Counsel late maturers to be patient and early maturers to expect less relative success when others ‘catch-up’ to them. Because of differences in proportions, previously executed skills may become difficult.
7. Avoid frequent overloading of the wrists, especially during the early part of this stage.
8. Specific anaerobic lactic endurance training should be emphasized (moderately at the beginning) as significant gains in these functions are possible. A specific (anaerobic) or non-specific (aerobic-anaerobic) training program will allow the adolescent to sensibly increase his/her maximal anaerobic power.
9. Intensive interval training is possible in the latter part of this stage.
10. Suggest novelty / variety to help produce general cross-training effects and minimize boredom, exhaustion and overuse syndromes. Also encourage team workouts, the use of videos and music to promote enjoyment and training quality.
11. Maintain a high specificity of flexibility training, especially after a workout when the muscles are warm and responsive.
12. Emphasize active methods to develop isometric strength in stretched out positions.

SUGGESTIONS

1. Increased emphasis should be placed in regularity of training and also strictly following the training schedule without fail.

2. Regular training of pranayama in the schedule should be implemented as it manipulates the cardio-vascular system to its maximum extent which is beneficial to all sports performance.

3. The training means and methods should be supplemented with proper diet, rest, leisure habits, and regular routine.

4. The training schedule should be prepared for different sports and the effect of pranayama in different sports is to be studied.

5. More research on more mass with differential environmental conditions should be studied.

6. The effect of pranayama on other motor abilities such as strength, speed, flexibility and coordinative abilities in different sports should be studied.