CHAPTER – I

INTRODUCTION

Kabaddi is basically an Indian game, which requires both skill and power, and combines the characteristics of wrestling and rugby. Kabaddi is aptly known as the “GAME OF THE MASSES” due to its popularity, simple, easy to comprehend rules, and public appeal. The game calls for no sophisticated equipment what so ever, which makes it a very popular sport in the developing countries. Though it is basically an outdoor sport played on clay court, of late the game is being played on synthetic surface indoors with great success. The duration of the game is 45 minutes for men & junior boys with a 5 minute break in between for the teams to change sides. In the case of women & sub junior boys, the duration is 35 minutes with a 5 minute break in between.

Kabaddi is a combative team game, played with absolutely no equipment, in a rectangular court, either out doors of indoors with seven players on the ground in each side. Each side takes alternate chances at offense and defense. The basic idea of the game is to score points by raiding into the opponents’ court and touching as many defense players as possible without getting caught on a single breath. During play, the players on the defensive side are called ‘Antis’ while the player of the offense is called the ‘Raider’. Kabaddi is perhaps the only combative sport in which attack is an individual attempt while defense is a group effort. The attack in Kabaddi is known as a ‘Raid’. The antis touched by the raider during the attack are declared out if they do not succeed in when their side scores points against the
opposite side during their raiding turn or if the remaining players succeed in catching the opponent’s raider.

Yoga, the Indian science to control body and mind through meditation and self control plays an integral part of Kabaddi. The raider has to enter the opponent’s court chanting the word ‘Kabaddi’ while holding his breath and has to continue to do so until he returns to his home court. This is known as ‘cant’, which is closely related to ‘pranayama’ of yoga. While pranayama is about with holding breath in order to exercise internal organs, cant is the means to with hold breath with vigorous physical activity. This is perhaps one of the few sports to combine yoga with hectic physical activity.

The game calls for agility, good lung capacity, muscular co-ordinates, presence of mind and quick responses. For a single player to take on seven opponents is no mean task, requires dare as well as an ability to concentrate and anticipate the opponent’s moves. (Rao, 2002).

ORIGIN

The sport has a long history dating back to pre-historic times. It was probably invented to ward off group attacks by individuals and vice versa. The game was very popular in the southern part of Asia played in its different forms under different names. A dramatized version of the great Indian epic. The Mahabharata has made an analogy of the game to surround on all sides by the enemy. Buddhist literature speaks of the Gautam Buddha to display their strength and win their brides.
FORMS FOR KABADDI

AMAR

Amar literally means invincible. This is a form of Kabaddi, which is played based on points scored by both sides. The play field has no specific measurements and nine to eleven players constitute each of the teams. In this form of Kabaddi, there is no out and revival system or lona but time is the deciding factor. The main advantage of this form of the game is that the players remain in the court throughout the match and are able to give their best performance.

GEMINI

This form of Kabaddi is played with nine players on either side, in a play-field of no specific measurements. The principle characteristic of this form of Kabaddi is that a player who is put out has to remain out until all his team members are put out. The team that is successful in putting out all players of the opponent’s sides secures a point. This is akin to the present system of ‘lona’. After all the players are put out, the team is revived and the game continues. The game continues until five or seven lona are secured. The game has no fixed time. The main disadvantage of this form of Kabaddi is that the player is not in position to give his best performance since he is likely to remain out for the better part of the match until a lona is secured.

SANJEEVANI

This form of Kabaddi is the closest to the present game. In this form of Kabaddi, players are put out and revived and the game lasts for 45 minutes with a 5-minute break in-between. The team consists of nine players on each side. The team that puts out all the players on the opponent’s sides scores four extra
points for a lona. The winning team is the one that scores the maximum number of points at the end of stipulated time. The play field is bigger in this form of Kabaddi and the cant was different in various regions. Modern Kabaddi resembles this form of Kabaddi a great deal especially with regard to out & revival system and lona. The present form of Kabaddi is a synthesis of all these forms of Kabaddi with a good number of changes in the rules and regulations.

**HISTORY**

Kabaddi attained national status in the year 1918. Maharashtra was the pioneer state to bring the game to the national platform and give it further popularity. Standard rules and regulations were formulated in 1918 but were brought out in print in the year 1923 and in this very year, an All India Tournament was organized at Baroda with these rules. Kabaddi has not looked back since then and numerous tournaments are organized all over the country throughout the year.

Kabaddi received its first international exposure during the 1936 Berlin Olympics, demonstrated by Hanuman Vyayam Prasarak Mandal, Amaravati, Maharashtra. The game was introduced in the Indian Olympics Games at Calcutta, in the year 1938. It was in 1950, that the All India Kabaddi Federation came into existence. Regular conduct of National level championship as per laid down rules and regulations began with effect from the year 1952. After the formation of the Amateur Kabaddi Federation of India, the first men’s Nationals were held in Madras, while the women’s Nationals were held in Calcutta in the year 1955.
The rules were modified and some changes were introduced to the game during the national championship held at New Delhi in the year 1954. Efforts were made to demonstrate the game in the world youth festival held at Moscow in the year 1957, but due to various unforeseen reasons, this could not be accomplished. The game was included in the curriculum of the Indian University sports control board as a main sports discipline in the year 1961.

The game got further recognition when the school game federation of India included it in the school games in the year 1962. This body has taken up the responsibility of organizing state and national level national level competitions for school going children all over the country in various sports on a regular basis, every year.

The Amateur Kabaddi Federation of India, the new body, came into existence in the year 1972. This body was formed with a view to popularize the game in the neighboring countries and organize regular national level men and women tournaments. After the formation for this body, sub junior and junior sections were included in Kabaddi national level tournaments, as a regular feature.

Kabaddi was included in the curriculum of Regular Diploma courses in coaching conducted by the National Institute of Sports, the premier institute to develop sports in the country with effect from the year 1971. Thereafter, qualified coaches in Kabaddi are being produced every year. These qualified coaches are equipped to train players at different levels in a systematic manner with sports science back up.

In the year 1974, the Indian men’s team toured Bangladesh as part of the cultural exchange programme to play five test
matches in different parts of the country. The Bangladesh returned the visit in the year 1979 and played five test matches in India.

The Asian Amateur Kabaddi Federation was formed in the year 1978, during the silver jubilee celebrations of National Kabaddi championships in India, organized at Bhilai, Madhya Pradesh. The first Asian Championship in Kabaddi was organized in Calcutta, in the year 1980. Federation cup Kabaddi matches also commenced in the year 1981.

Kabaddi was included as a demonstration in the IX as Asian Games hosted by India in the year 1982. In the year 1984 an open Inter-National tournament was organized at Bombay, in India. During the Tri-Centenary celebrations of the city of Calcutta, an Inter-National Invitation Kabaddi Tournament was organized in the city.

The South Asian Federation included Kabaddi as a regular sports discipline from the year 1984. Kabaddi was played for first time in the SAF Games, which is played once in two years. For the first time in the Inter-National Kabaddi scenario, India faced defeat at the hands of Pakistan and had to be satisfied with second place, winning the silver medal, in the VI SAF Games at Decca, Bangladesh, in the year 1993.

The Second Asian Championship was hosted by India and was organized at Jaipur, Rajasthan. Malaysia and Japan participated for the first time in this championship. In the XI Asian games held in the year 1990 at Beijing, China. Kabaddi was included in the main disciplines. This was a major landmark
in the history of Kabaddi. India won the gold medal, which was a proud and unforgettable moment for Kabaddi lovers who had striven to bring Kabaddi to the Asian platform. India has been the reigning champion in the succeeding Asian games held in various cities so far. The Kabaddi World Cup was first played in 2004 and then in 2007 and 2010. So far India is the unbeaten champion in Kabaddi World Cup.

Kabaddi was being introduced to the African countries as a demonstration sport in the Afro Asian games, which was hosted by India. This is a feather in the cap for Kabaddi lovers and has been made possible thanks to the efforts of Mr. J. S. Ghelot, President, Amateur Kabaddi Federation of India and the Indian Olympic association.

DEVELOPMENT OF THE GAME

There is a gradual but marked change in the style of the game during the past fifty years. What was once considered a game of brawn is not so now. The introduction of more techniques to the game has made it relatively easier for a player with more skill than weight to score points against better-built opponents.

Over the years, the game’s pattern changed along with the rules and the size of the playfield. The concept of Kabaddi as an indigenous game of India first came up during the year 1921 in Maharashtra, when a certain framework of rules was prepared and the game was played on the pattern of Sanjeevani & Gemini in a combine form. These rules were applied in an All India Kabaddi tournament organized during the same year.
It was the Hanuman Vyayam Prasarak Mandal, Amaravati, Maharastra, which took up the task of organizing and developing Kabaddi in a more systematic & scientific manner. This institution believes in the maxim “A healthy mind in a healthy body” and has been doing yeoman’s service to sports in general and indigenous games in particular, over the years. During the years 1927 to 1952, Kabaddi was played in different parts of the country based on rules framed by the various clubs and organizing committees, which mushroomed and gained in prominence. There were frequent disputes over the rules during tournaments owing to lack of uniformity in the rules and regulations followed in various parts of the country.

In Maharashtra, the pioneering state to regularize the game and bring it to the national platform, Kabaddi, which was known as “Hu-Tu-Tu”, was played according to the rules framed by the Deccan gymkhana from 1928 to 1938.

The introduction of the game to the International arena as a demonstration game in the 1936 Berlin Olympics led to the inclusion of Kabaddi in the list of priority games of the Indian Olympic committee, in the year 1940. Thereafter, Inter-provincial Kabaddi tournaments were organized bi-annually.

The matches at the district and provincial level were played as per the rules framed by the Akhil Maharastra Sharirik Shikshan Mandal, while the Inter-provincial Championships were based on Buck’s Rules of Games and sports, published by Mr. H. C. Buck, founder principal for YMCA college of physical Education, Madras.

The Indian Olympic Games were re-named as National Games in the year 1952 and are since being organized once in a
year instead of bi-annually. The All India Kabaddi Federation, which was formed in the year 1952 appointed a Rules sub-committee with the express purpose of laying down standard rules and regulations to be followed by affiliated provincial units all over the country. A new set for rules were framed by the Rules Sub-Committee based on Buck’s Rules and the game rules were followed till then by the Akhil Maharastra Sharirik Shikshan Mandal.

The game’s pattern also changed over the years, along with the standardization of rules and regulations. Some of the major changes in the game’s pattern include the introduction of the unproductive Raid Rule. Time out system, Bonus Line Game, etc that did not change the basic structure of the game but all the same had a lot of impact.

**Prediction**

One of the goals of scientific research is to predict future events or results from present or past data. There are different types of prediction that we come across in our daily life, such as wealth-forecast, market-forecast, share market-forecast, election trends etcetera. These are based upon some known facts and so they are reliable prediction.

Research in the field of sports and games had proved that the future performance of an individual or team could be predicted through the analysis of certain variables, which are found to be the basis for total performance. Among many factors the following variables such as anthropometrical, physical, physiological, psychological and skill performance that decide the playing ability of an individual are more important.
Team Kabaddi is one of the team based sports and it is played both men and women throughout the Asia. Kabaddi is growing game in India especially in outside Asia. In India every year All India Inter-University Kabaddi tournament for both men and women were organised by Association of Indian Universities. Only few studies are available in prediction on Kabaddi players.

**Sports Science and Kabaddi**

Sports science plays a critical role in Kabaddi performance. The game Kabaddi is a team based sport and it demands number of external and internal factors like anthropometrical, physical, physiological and psychological characteristics to play the game at elite level. The role of sports science in Kabaddi is elaborated hereunder.

**Anthropometric Characteristics and Kabaddi**

Anthropometric measurements relevant to human movement gained formal recognition as a discipline with the inauguration of the International Society for Advancement of Kinanthropometry in 1986. Anthropometrists of all continents have participated in several major multidisciplinary studies that are being or have been conducted to assess the physical characteristics of people. Kinanthropometry has been defined as the quantitative interface between human structure and function. (Ross, Drinkwater, Bailey, Marshall, Leahy, 1980). This interface is examined through the measurement and analysis of age, body size, shape, proportion, composition and maturation as they relate to gross body function. Previous reports have shown that body structure and morphological characteristics are important
determinants of performance in many sports and certain physical impressions such as body composition (body fat, body mass, muscle mass) and physique (somatotype) can significantly influence athletic performance (Carter, 1970 and Duquet & Carter, 2001).

Kabaddi is one of the popular team sports which require a high standard of preparation in order to complete 40 minutes of competitive play and to achieve success. In this game movement patterns are characterised as intermittent and change continuously in response to different offensive and defensive situations. Anthropometric factors and morphological characteristics can influence the effectiveness of such responses, as has been observed in other sports (Deng, Lin, Xia, Cheng, 1990). Therefore, anthropometric profiles may contribute to understanding the suitability of players for the sport of Kabaddi, particularly elite level.

Previous bunch of anthropometrical studies reports have shown that body structure and morphological characteristics can determine the selection of participants in many sports. Results of cross-sectional anthropometric studies have tended to suggest that certain physical factors including body composition (body fat, body mass, muscle mass) and physique (somatotype) significantly influence athletic performance (Carter, 1984). The knowledge of the physical characteristics of Kabaddi players could provide insight into those individual factors which influence the players’ performance in the game. Anthropometric characteristics are very relevant for Kabaddi players because the game of Kabaddi entails physical contact in which specific
physiques with a high level of strength and power may provide an advantage. The Anthropometric characteristics of Kabaddi players are considered in the choice of players to implement the game plan.

In modern sports, successful performance is determined by number of factors. For optimum performance at elite level, variety of areas must be addressed. Further, Kabaddi is the game where size, shape and body composition play an important part in providing distinct advantage for specific playing positions. These include the skill level, flexibility, endurance and most importantly the specific use of anthropometric measurements which plays a vital role in complex team based games. Since success in the game depends among other things, on how the individual characteristics of some players fit into the whole, thus creating a coherent team. Kabaddi is one of the complex technical team based game and performance differences between players of varying ability levels are different.

**Physical Characteristics and Kabaddi**

In performance and high performance sport, a great importance is given to the physical condition. It is in fact the preoccupation for the adaptation of the sportsman’s body to growing physical and mental efforts, to which all the parts of the human body participate. The contemporary Kabaddi game, characterised by high intensity motor activities, places upon players a wide spectrum of requirements on all their capabilities. One can hardly single out any ability or a characteristic which is not engaged in the performance of Kabaddi players. Basic and specific motor abilities and cardio-respiratory capacities, such as
explosive strength, required at the centre line. As well as agility and speed which are indispensable for the efficient solving of game situations. A high level of aerobic capacity ensures the slower onset of fatigue and a fast recovery, whereas anaerobic capacity is responsible for endurance in high intensity repetitive activities.

Team Kabaddi is a complex intermittent game, which requires players to have well developed aerobic and anaerobic capacities. Motor ability, sprinting, jumping, flexibility and throwing velocity represent physical activities that are considered as important aspects of the game and contribute to the high performance of the team. Successful performance requires explosive power of the legs and arms, sprint velocity. (Sibila, 1997).

The specific characteristic of Kabaddi demands from players an effective participation in activities that need a good aerobic and anaerobic response. However, some authors report that Kabaddi is a sport that demands predominantly the motor capacities that depend on the anaerobic metabolism. Thus, it seems reasonable to affirm that the motor capacities strength & velocity and their ways of manifestation are crucial, since the technical and tactical capacities can be consistently superior when the Kabaddi players present high levels of adaptation of the anaerobic metabolism

Kabaddi is an endurance game. Without endurance the player cannot perform well, in the same time the player’s need all the characteristics i.e. speed, agility, flexibility etcetera. Nowadays most of the players having good height can perform
well in the game situation. Without physical characteristics players cannot achieve the aim of the game, so physical characteristics is very essential for the better performance of Kabaddi.

**Physiological Characteristics and Kabaddi**

Kabaddi is a complete collective sporting modality, characterized by the great amount and variety in its movements, ball manipulations and interaction with other athletes. Looking for a better dynamic and objectivity, Kabaddi passed through several evolutionary processes that, consequently, started to demand from the athlete’s larger physiological adaptations and other characteristics. The athlete’s income in the Kabaddi of high level depends directly on several variables. The evaluation of the performance implicates the recognition and denomination of the individual level of the components of the sporting performance or of a conditioning situation. (Weineck, 1999).

It is essential that all the variables related to the athlete’s performance be evaluated. Even with that importance, it is still noticed a lack of studies that use evaluations and analysis with direct measures, seeking to determine the maximum aerobic potency the maximum anaerobic potency, the anaerobic threshold and the lactate threshold, in athletes of the feminine Kabaddi.

For our country to be successful in sports, to distinguish the representing sportsman much earlier is indisputably required. As in all sports, technical, tactics, capacity as well as condition of a team are the basic elements to be successful in
Kabaddi. Main discussion in this manner seems to continue in terminological concepts. Physical variables as age, height, weight, taking role in Kabaddi sport branch were taken into consideration. As selection of a proper person for Kabaddi is performed in early ages, physiological properties with physical profile should be learned. Variables to determine physical profile were observed. The observed variables comprise of respiration parameters, blood pressures, aerobic and anaerobic capacity. Aerobic exercise shortly means a work with oxygen. It is realized with working of large muscle groups in the presence of abundant oxygen, at 60% - 80% level of maximum pulse for at least 12 minutes or long period. The indicated period, 12 minutes, is very essential, here. Because, at the end of this period, the enzymes to burn the fat of body are produced then. In addition, aerobic exercise causes to increase the intake amount of oxygen into body, to provide heart to consume much oxygen and increase condition level of heart as well as lungs. Anaerobic means lack of oxygen muscles work with needed to oxygen. This case also activates the sugar consuming enzymes. In this activation, more energy is consumed than the body may produce with metabolizing oxygen.

Psychological Characteristics and Kabaddi

The ability to cope with pressure and anxiety is an integral part of sports, particularly among elite athletes (Hardy, Jones & Gould, 1996; Orlick & Partington, 1988). Researchers have reported that consultations among 50 athletes at an Olympic festival were related to stress or anxiety related problems (Murphy, 1988). A great deal of research has been conducted
examining the relationship between anxiety and performance among the players.

It is generally recognized that psychological factors are of crucial importance in high-level competitive sports. The relation between anxiety and performance has been the subject of many thorough researches (Craft, Magyar, Becker & Feltz, 2003; Parfitt & Pates, 1999; Martens, Vealey & Burton, 1990). Cognitive anxiety is characterised by negative concerns and worries about performance, inability to concentrate, and disrupted attention (Krane & Williams, 1994). Somatic anxiety consists of an individual’s perceptions, which are characterised by indications such as sweaty palms, butterflies, and shakiness (Martens, Burton, Vealey, Bump & Smith, 1990). Research has also been done on the gender differences concerning state anxiety levels. Self-confidence tends to decrease in females on the day a competitive event is to occur. Male young athletes typically display lower levels of anxiety and higher self-confidence than female athletes (Scanlan & Passer, 1979); Wark & Witting, (1979). Krane and Williams (1994) found no gender differences for cognitive anxiety. They also demonstrated that the more experienced college player would show lower levels of cognitive and somatic anxiety than the less experienced player. As far as Kabaddi is concerned, it is suggested that psychological factors play an even more decisive role in a competition, differentiating between successful and less successful teams.

In recent years, there has been growing concern that competitive sport has become more violent and aggressive. Aggressive behaviour and acts of cheating occur regularly at all
levels of sports participation, and there is evidence that a great deal of such illegal aggressive behaviour in sport goes completely unpenalised (Sheldon & Aimer, 2001).

**Rationale for taking-up this Study**

In India, Kabaddi is a popular sport, played by men and women almost in all states and union territories. Since, the researcher is a player, official and coach in Kabaddi game; he felt that there is a need for an analytical study in order to discriminate the factors associated in predicting the success in Kabaddi at inter-collegiate level. Moreover, very little research had been done on Kabaddi players, which motivated the investigator to take up the study.

**Statement of the Problem**

The purpose of the study was to predict the playing ability in Kabaddi from selected anthropometrical, physical, physiological, and psychological variables among college level players.

**Hypothesis**

It was hypothesised that playing ability in Kabaddi might be predicted from selected anthropometrical characteristics, physical fitness components, physiological parameters and psychological factors among college level players.
Significance of the Study

1. This study will help the physical education teachers and coaches to design a specific programme to identify the talents, which are closely associated with the better Kabaddi performance.

2. Study will reveal the influence of anthropometrical, physical, physiological and psychological characteristics on the overall playing ability of Kabaddi players.

3. This result might be utilized as a screening instrument in analyzing and classification the Kabaddi players.

4. The result of this study will help the young budding researchers to take up similar studies in other areas and disciplines.

Delimitations

The study was confined to the following aspects,

1. This study was confined to only male intercollegiate Kabaddi players from various colleges within the Tamil Nadu state, India.

2. The subjects for the present study have been delimited to the 268 inter-collegiate Kabaddi players only.

3. The age of the subjects ranged from 17 to 25 years.

4. The study was delimited to the following independent variables.
**Anthropometrical** – Body weight; **Length measurements** – Height, Arm length, Arm span, Leg length, Hand length, Hand breadth; **Girth measurements** – Chest girth, Waist girth, Hip girth, Thigh girth, and Calf girth.

**Physical** – Speed, Agility, Flexibility, Leg explosive strength and Muscular endurance.

**Physiological** – Cardiovascular endurance, Resting heart rate, Peak expiratory flow rate and Breath holding time.

**Psychological** – Somatic anxiety, Cognitive anxiety, Self confidence and Sports achievement motivation.

**Limitations**

1. The variance in playing experience among players due to the participation in tournaments will be considered as a limitation of the study.

2. Similarly the playing ability difference due to their participation in the coaching programme, if any, will also be added to the limitations.

3. Certain factors like food habits, life style, climatic condition, and other environmental factors could not be controlled which may influence the results and hence they may be considered as one of the limitations of the study.

4. The students were from different social cultural and economical status which was considered as a limitation for this study.
5. The response of the subjects to the statements in the questionnaires would depend upon various factors such as understanding of the statements, seriousness and sincerity of the subjects.

6. No specific motivational techniques were used to encourage the subjects to attain their maximum performance during testing.

**Operational Definition of the Terms**

**Kabaddi**

According to Wikipedia, (2011) Kabaddi is a combative team game, played with absolutely no equipment, in a rectangular court, either outdoors or indoors with seven players on the ground in each side. Each side takes alternate chances at offense and defense. The basic idea of the game is to score points by raiding into the opponents’ court and touching as many defense players as possible without getting caught on a single breath. During play, the players on the defensive side are called ‘Antis’ while the player of the offense is called the ‘Raider’. Kabaddi is perhaps the only combative sport in which attack is an individual attempt while defense is a group effort. The attack in Kabaddi is known as a ‘Raid’. The antis touched by the raider during the attack are declared out if they do not succeed in when their side scores points against the opposite side during their raiding turn or if the remaining players succeed in catching the opponent’s raider. The team with the most points after two periods of 20 minute wins.
Anthropometry

Anthropometry is the study of the human body in the terms of the dimensions of bone, muscle, and adipose tissue. It is the measurements of the human body to discover its exact dimensions and the proportion of its parts. (Surinder, 1993).

Body weight

Mass is the quantity of matter in the body. Mass is calculated through the measurement of weight, i.e. the force the matter exerts in a standard gravitational field. (Michael, 2006).

Standing height

The perpendicular distance between the transverse planes of the planes of the vertex and the inferior aspects of the feet. (Michael, 2006).

Arm length

The linear distance between the Acromial and Dactylion sites of the lateral view. (Michael, 2006).

Arm span

The linear horizontal distance between the dactylion sites (tip of the middle fingers) with the arms extended laterally and at shoulder level. It includes the width of the shoulders and length of both the upper limps. (Michael, 2006).
**Leg length**

The vertical distance between the Trochanterion lateral site to the standing surface. (Michael, 2006).

**Hand length**

The linear distance between the Mid-stylion and Dactylion sites. (Michael, 2006).

**Speed**

According to Corbin, (2007), speed is an ability to perform a movement or cover a distance in a short time.

**Agility**

According to Elizabeth, (2007) agility is the ability to move and change direction and position of the body quickly and effectively while under control.

**Flexibility**

A person's flexibility refers to the ability of his joints to move through a full range of motion. (Paige, 2008).

**Strength**

Strength is the ability to overcome resistance or to act against resistance. (Singh, 1991).
**Cardiovascular endurance**

Cardiovascular endurance is the ability of the heart to provide oxygen to muscles during physical activity for a prolonged period of time. (Jonson, 2010).

**Resting heart rate**

This is a person's heart rate at rest. The best time to find out your resting heart rate is in the morning, after a good night's sleep, and before you get out of bed in the morning. (Jonson, 2010).

**Peak expiratory flow rate**

Peak Expiratory flow is the maximal flow achieved during the maximally forced expiration initiated at full inspiration, measured in liters per minute. (William, 2003).

**Breath holding time**

It is defined as the duration of time through which one can hold his breath without inhaling or exhaling after a deep inhalation. (Strukic, 1981).

**Somatic anxiety**

Somatic anxiety refers to the physiological and affective elements of the anxiety experience that develop directly from autonomic arousal. (Martens, et. al 1990).
Cognitive anxiety

Cognitive anxiety is the mental component of anxiety caused by negative expectations about success or by negative self evaluation. (Martens, et. al 1990).

Self confidence

Self confidence is the belief that you can successfully perform a desired behaviour. (Weinberg & Gould, 2003).

Achievement motivation

Motivation is based on your emotions and achievement-related goals. Achievement motivation is based on reaching success and achieving all of our aspirations in life. (Griffin, 1999).