Chapter - I

INTRODUCTION

Sports is a psycho-physiological activity. It has both psychological and physiological dimensions, besides physical, social and technical aspects. In this modern era of competitions the psychological preparation and physiological fitness of a sportsman is as much important as teaching the different skills of a game on the scientific lines. These sportsman are prepared not only to play the game, but to win the game, and for winning the game, it is not only the proficiency in the skills which brings victory but more important is the psychological, physiological and physical prowess of the players.

High sports performance is the result of a multiple factors such as physical fitness, skill fitness, constitutional factors, tactical efficiency etc. The performance of world class judokas is the result of interaction of a number of factors which includes psychological and physiological demands also.
Our identities are created things. In developing them we use material from the surrounding social environment. By identifying or contrasting, ourselves with shared ideas and images, we construct an identity that is both salient to ourselves and understandable to those around us. Most discussion on the martial arts, both academic and popular, revolves around historical analysis or technical description. However, in our cultural context, these arts are not just a means by which people learn to fight. The dedication with which so many people, most of whom never use their learned skills to practical effect, pursue these arts points to something else active in their participation. Identity, as stated, is a created thing.\(^1\)

Violence has been an inescapable fact of human life since the beginning of time. It is reasonable to suppose, therefore, bearing in mind human ingenuity, that self defence systems were devised at a very early stage in order to ensure survival of the species. Indeed, man's combat skills have been undergoing a constant evaluation. Each addition, by way of another through out movement, aided the struggle against aggressors and began to form the basis of a martial skill. Slowly

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and gradually, mostly through trial and error, fighting became more of an exact science rather than just pure animal instinct.²

Judo is now practiced in almost every country in the world. Judo techniques are divided into three categories: tachiwaza (standing techniques), newaza (ground techniques) and atemiwaza (vital point techniques). Within these three categories are many sub-divisions that encompass the whole periphery of judo technique. Tachiwaza is also known as nagewaza (throwing techniques). Atemiwaza derived from jujitsu, is practiced only for self-defence and is prohibited in competition.³

Judo is an unarmed combat sport. It is comparable in many ways with boxing and classical forms of wrestling, but has many advantages over these sports. Boxing in particular is losing favour because of the risk of brain damage and disfigurement, coupled with this is the fact that one of the objectives of the sport is to hurt one’s opponent.⁴

³ Ibid. p. 95.
Judo's long road to the Olympics is an intriguing tale of the effect, Western values has had on world society in the twentieth century. When Jigoro Kano created judo in 1882 with the opening of his small eight-mat dojo in Eishoji Temple in Tokyo which he called kodokan Judo, it was an activity designed to forge the physique and spirit of young men. In many ways, Kano's idea of judo was a composite of two ideals. The first was inherent in the name he gave his activity. The Japanese concept of 'do' encompassed the principle of a 'path' or way to or greater understanding of life both for the individual and for the general benefit of mankind. The second idea was close to the idealized image of the Greek man. Kano was highly educated and aware of the ancient Greek tradition which admired wrestlers, archers and swordsmen. In short, the spirit could be honed by physical as well as mental skills.\(^5\)

Contest represents the cutting edge of that huge conglomeration of history and hopes of aspirations of techniques and of theory that makes up the rich and varied world of judo. The years have shown that judo is one of the liveliest sports in terms of innovation, and one of the richest in terms of sheer variety of

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techniques. In fact, judo is moving so quickly that it is almost as difficult for a coach to keep up to date with the latest ideas as the computer expert struggling with new marvels every week.  

It has been said that judo is one of the very few sports where, after twenty years of active involvement, it is possible to go a competition and still see something totally few. Sometimes it is just a minor adjustment to a grip or an entry which is nevertheless sufficient to bring to life a technique previously written off as old fashioned and easily stopped. Sometimes, it is the combination of something old with something new. Or it could be a question of the cycle of fashion, with people forgetting defences and counters to some old throws that were toppling our judo grand fathers. More rarely, it is a real innovation, which sets in train a series of new ideas based on the same theme.  

Prof. Kano explained that Judo and Ju-justu both are written with two Chinese characters. The ‘Ju’ in both is the same and means ‘gentless’ or ‘giving way’. The meaning of ju-jutsu is ‘art, practice’ and do means ‘principle’ or ‘way’

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7 Ibid. P.4.
the way being the concept of life itself. Jujutsu may be translated as “the gentle art”, 'judo' as “the way of gentleness”, with the implication of first giving way to ultimately gain victory.⁸

Prof. Jigoro Kano took the best of Jujitsu self-defence techniques and cut out those that were harmful. He modified others so that they could be practised safely. Judo uses skill and flexibility for attack and defence. Judo is known as “gentle way”. Strength is of course applied but it is even more important to know how to use it. In emergencies Judo can be a form of self defence.⁹

Apparently and understandably, the beginning of Judo in India is shrouded in mystery. The first definite written reference of judo coaching available in Kodokan refers that Gurudev Ravindernath Tagore arranged demonstration and coaching of Judo at Shantiniketan in 1929 by Mr. Takagaki, a Japanese Judo coach in India. This unforgettable, historical and marvellous union of outstanding personalities in two different fields was blessed with the formation of the special poem, on judo written by none other then Gurudev Ravindernath Tagore himself.

It is fascinating to note that many Indians learned Judo and were graded by Kodokan before 1929. As per records at Kodokan Sh. Deshpande was the first Indian to be awarded Black Belt (Sho-dan) in 1932). In 1904 five Indian judokas were practicing Judo in Kodokan. There are evidences that judo was being practiced in India before 1929 also. Mr. A.P.S. Barodawala learned judo from the two Japanese, who stayed in Bombay for quite some time and got Black Belt in 1930. A few year later French Judo experts started coaching in Aurobindo Ashram, Pondichery.

The belief that Mr. Khaniwala was the first Indian to learn and start Judo Coaching in India is not correct. As a matter of fact. Mr. Khaniwala went to Japan in 1929 and learned judo during his stay there later on he was awarded Black Belt (Sho-dan) from Kodokan in 1934 and started judo club in Amravati, Maharashtra.

In 1965 when Judo Federation of India was formed, there were three prominent Judo Clubs in India. Kajau Judo Club, Wallesley St. Caleutta.

The next 30 years consolidated the game of Judo in other states and clubs of India. There were efforts to broadbase the game and to encourage likeminded
individuals to learn the art and skills of judo. Since one form of Judo i.e. Randori was similar to wrestling, many wrestlers took interest in Judo and dominated in organizational and day to day functioning until a batch of real Judokas took keen interest in organizational matters. Most of these Judokas were either from Bombay or Pune and contributed a lot in establishing Judo in India in the true sense of the game.

The formation of Judo Federation of India in 1965 considerably accelerated the growth of Judo in India. International Judo Federation gave affiliation to this newly constituted body. The first National Judo Championship was held at Hyderabad in 1966 and since then almost every year National Judo Championship are being organized by Judo Federation of India.

By the seventies the game of Judo had generated considerable interest among Indians of course a need for professional Indian Judo Coaches was being felt, as it was not possible to call foreign experts all the time. To over-come this problem and to train more and more coaches Mr. Takashi Ogata was invited to India in 1976 to start a Diploma course at NIS Patiala. Mr. Morio Suganami a
Japanese, Judo Coach, who visited India in 1979 helped a lot in organizing more judo competitions at State and National levels.

By now, Judo had got established almost in every state. The competition at National level had become very tough. Maharashtra, which was hitherto retaining National Championship faced tough competitions from Judokas of Delhi and Haryana. Although Indian Judo players of this period were skilled and capable of winning the medals at International level. They could not participate in International Championship due to non payment of affiliation charges.

Judo was included in Asian games in 1986 at Seoul. This was the first International competition for Indian team and they got four bronze medals. Thereafter India is contiously dominating in South Asian Judo Championship.

The future of Judo in India appears to be very bright. Presently, Indian Judo players are dominating at South Asian level and some of the players have got bronze medals at Asian level also. However, keeping in view the standard of Japanese Korean, Chinese and Judokas of some of the Russian countries recently included in Asia. The competition has become more and more tough and Indian
Judokas have to work hard to achieve first five positions. Scientific back up, proper coaching good equipments and favourable environment can bring tremendous results at International level. Identification of district level coaching centres for providing required facilities, as suggested by Judo Federation of India is a right step in that direction.

In the last few decades Judo has gained tremendous popularity of all over the globe. The popularity of Judo is still increasing at a fast pace and this happy trend is likely to continue in the future also. When one looks at the history of Judo one finds that the total number of participating countries and sportsmen have increased steadily.

If we compare the ancient and modern Judo, the result shows that the modern Judo has adopted various scientific methods. On the other hand ancient Judo was full of traditional type of training. Though Judo is also gaining popularity in our country. But still everyone in our country is not familiar about this sport.

Judo may be described as a science for the study of potential powers of the body and mind and the way of applying them most efficiently in combative
activities. Hence, it is involved with the study of the laws of gravity, dynamics and mechanics as related to the function of the human body. Efficiency in Judo is certainly a valuable asset, but the real value applied to life in the effects which the training produces on the state of the body and mind.\textsuperscript{10}

Today, the Judo championship is played off under the classified body weight system to relieve handicap of body weight. The idea behind the establishment of the body weight classification system is that the difference of body weight equals the difference of the muscles strength as observed. In other sports, such as wrestling, boxing and weight lifting, it creates a decisive influence over crucial result of the game. Therefore, besides judo, wrestling, boxing and weight lifting have adapted the body weight system.\textsuperscript{11}

Psychology as a behavioural science had made its contribution in this regard, it has helped the coaches to coach more efficiently and enhance sportsman's performance more proficiently. Psychology is also concerned with the


total well being and personal adjustment to those involved in sports. Psychologist are concerned with behaviour understanding, explaining and ever predicting.\(^{12}\)

Sports competitions have assumed as extremely important place in the human society these days. With the beginning of the Modern Olympic Games in 1896, tremendous changes have been taken place in the methods and methodologies of training for athletic competitions at the National as well as International levels. The insatiable quest for pursuit of excellence has given rise to interdisciplinary approach to the understanding applied to the preparation of athletes for intense competition as it is being done today.

The craze for winning medals in the Olympic and other inter-national competitions has catalyzed the sport scientists to take "interest in exploring all the aspects and possibilities which can contribute to enhance sports performance to undreamed heights".\(^{13}\) It has been established beyond doubt, "much of the human physiology is controlled by human psychology and that physiological preparation


in sports is consequential in the absence of study of human behaviour as it related to competitive sport. The virgin realm of the mind has to be explored without which neither excellence nor perfection could be ensured.\textsuperscript{14} It is now being claimed that regardless of how much ability, skill or fitness a person possesses for a particular task or sport, the success or quality of his performance will in the final analysis probably depend on his particular psychological make up.\textsuperscript{15}

The first pre-requisite for success in any activity lies, as is well known is high motivation. Therefore, while preparing the athletes, it is important first of all to form and develop in his striving constability induce in him an urge to systematically useful results. Desire for around harmonious development of the personality through preparation for creative work and Defence, the desire to make one’s contribution to the progress of the sports and to glorify one’s collective and countering by sporting achievement.\textsuperscript{16}


\textsuperscript{16} G.L. Kukushkin, The System of Physical Education in the USSR (Moscow: Raduga Publishers), p. 139.
Motivation in general is a process which indicates why people participate in sports, the way they do. The urge to run and play when young to excel when competing to struggle when hindered to prove something when challenged to escape when confined to be aggressive when angered and to flee when frightened are typical of man as he matures and develops and moves through life's many dangerous and competitive situations.  

An understanding of achievement motivation is helpful in understanding kinds in general as well as individually in terms of what they do; how well they do and how long they continue in sports. Once one comes to know as to what works as a "driving force" it becomes easier to guide the athlete in to achieving excellence. When the desire for achievement becomes a dominant concern for the person, it is expressed in restless driving energy aimed at achieving excellence, getting ahead, improving upon past records, bealing competitors, doing things better, faster, more efficiently and findings unique solution to difficult problems.  


Wood assumed that the incentive value of various goals that individuals perceived as available partially determine their motivation to participate in competitive sport. The theory of incentive motivation is still in infancy; however, it revolves round at least seven major systems: they are i) excellence, ii) Power (to influence change and control the opinions and attitudes primarily at other athletes and coaches towards them); iii) Sensation (to have exciting, interesting and sensory experiences primarily in terms of novelty, uncertainty and complexity) i.e. seek excitement through sports; iv) independence (to do things without the advice or criticism of other athletes and coaches); v) success (to receive prestige, recognition, status and social approval for their achievements); vi) aggression (to physically dominate and psychologically intimate other athletes); and vii) affiliation (to attain, maintain and consolidate warm inter-personal relationship, primarily with other players and coaches). A few studies conducted on the incentive motivation upheld that the major reasons why athletes participate in competitive sport fall under the incentive systems of excellence, affiliation sensation,

success.\textsuperscript{20,21,22} and in order to take a coherent athletes, it is but necessary to access the incentive motivation system alongwith achievement motivation.\textsuperscript{7}

Anxiety plays a paramount role in sport. It is the challenge in sports participation which produces anxiety. How an athlete handles the anxiety determines how successful he would be. Anxiety may be positive motivating force or it may interfere with successful performance in sport events. The degree of anxiety also varies with a number of different conditions. Anxiety is likely to be greater in higher competitive sports than in relatively non-competitive sports, because in the competitive sports, participants are expected to win and great demands are made upon them to succeed. The study of the effect of anxiety on sports performance has become a major topic of interest in sports psychologists, in

\textsuperscript{20} Ibid.


recent years. The degree of perceived anxiety is an important variable to be considered in the performance of an individual.23

Modern perspective of anxiety have ranged from the ideas of Freud, who defined anxiety as a response to perceived danger or stress, to contemporary attempts of psychologist to alter patterns of anxious behaviour by adjusting the chemistry of brain. It is from both personality, theorists and psychoanalysts that sports psychologist have obtained tools with which to carry out research and to help athlete adjust emotionally to stress imposed by competitive sport. Cognitively anxiety is a label given to feelings by the individual as the result of some event which may consists of an impending situation an insult from another person a physical treat by another and even thoughts about threatening situations and conditions. In the late 1960s, it was believed by the psychologists that anxiety was an inborn trait and hence a personality factor. However, social psychologist did not agree with such an assertion because they thought that the ways in which individuals feel and behave were in response so specific situations and reflected significant swings of mood. This is how the ideas of state anxiety emerged. In the

great version of anxiety test questions about feelings are proceeded by directions to state, “how I generally feel”, 24 and in the state measure the individual is asked to respond to items reflecting “how I feel right now”. This may trait anxiety seems to be a part of man’s personality make - up whereas the state anxiety is episodic to the specific situations. The concepts of sport competition anxiety cropped up just a decade age. The sport competition anxiety test constructed by Martins25 was based on the motion that an athletes perception of threat in a competitive situation is measurable through self report. It should therefore, be understood that sports competitions is nothing but situational or episodic anxiety very specific to sport competition situations. A few sport psychologists have also attended an assessment of situational anxiety before during and even after sports competition and termed it as pre-competition in competition and post competition anxiety. In order to have a holistic view of anxiety level in an athlete it is but naturals and appropriate to assess all the three types of anxiety and not one alone. Interestingly, it is still now very clear despite extensive studies as to how trait anxiety interacts with situational and competitive anxiety.


to remain in complete if the level of anxiety is not given due place in the scheme of psychological parameters related to excellence in sports.

For the physiological system of the body to be fit, the systems must function well enough to support the specific activity that the individual is performing. Moreover different activities make different demands upon the organism with respect to circulatory metabolic neurological and temperature-regulative function.26

Judo is dynamic physically demanding sport that require both glycolytic energy production related to bursts of intense muscular activity and an adequate aerobic reserve to sustain activity over the five minutes match duration. High level of physical activities are needed to prevent injury and to offset fatigue which could lead to faulty biomechanical techniques, competition is organized by weight division and therefore low adiposity and high strength per unit body mass are desirable characteristics in these athletes. Training programme for judokas have typically been based upon intuition and personal experience current information

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regarding the physical and physiological characteristics of judokas is required in order to provide an objective basis for the development of programmes.

Judo activity demands speed and appreciable anaerobic reserves for quick explosive movements. Judoka should also have considerable aerobic capacity as well as they should be able to recover quickly to exhibit better performance in the subsequent bouts.

The peculiarity of a judo match is that it is a contest between two partners and consist of executing the techniques while grappling with each other. The outcome of the match depends on the sharpness and dexterity of executing the decisive technique. Consequently, the most important factor in winning a match is the Waza (technique). However, in an actual contest, the supporting factor of physical fitness is also of great importance. In order to be able to use freely and effectively the various techniques, one must have adequate muscle strength, instantaneous strength, agility, and stamina or endurance. Actually according to Ikai and Kaneko, pulse rate reaches the human limit of 180 per minute during a Randori (free exercise). Also the result of measurement of energy metabolism by
sugimoto indicates that the practice of judo imposes a considerable load on the respiratory and cardio-vascular functions. 27

Winning laurels at international sports arena has becomes a prestige issue linked with potential system and as such nations i.e. with each other to produce top class sportsman for international competitions. For this, research is systematically conducted to identify factors that help in achieving levels of skill which a player can attain through proper coaching and evaluation. 28

Every judoka is aware of severity of judo practice. However, if asked how severe it is? An appropriate answer is very difficult to find. Actually, there is not enough scientific data which gives a satisfactory reply to the question. So far the appropriate answer to the question, the scientific studies should be done and the physical education teacher, coach should follow the scientific procedures to train their judokas.


It is known fact that infrastructure facilities of the Indian Judokas have improved amply in the recent past. The only factor which perhaps does not seem to have been given adequate attention is the psychological and physiological approach. It is also established beyond doubt that no serious study on the Indian Judokas with regard to their psychological and physiological make-up was ever taken-up in order to spot-out the gaps and subsequently bridge them, hence, the scholar in the form of present study is making modest effort in this direction to prepare psychological and physiological profiles of Indian Judokas in relation to age and weight categories.

**STATEMENT OF THE PROBLEM**

The purpose of this investigation was to characterize elite Indian Judokas by their selected psychological and physiological responses to standard human performance measures and to compare them in different weight categories and in two different age groups.
DELIMITATIONS

The study was delimited to the following psychological and physiological variables:

(a) Psychological variables

(I) Incentive Motivation (consisting of seven items)
- Excellence - Power - Sensation - Independence - Success
- Aggression - Affiliation

(ii) Achievement Motivation

(iii) State and Trait Anxiety

(iv) Sports Competition Anxiety

(b) Physiological Variables

(I) Anaerobic Power

(ii) Resting Heart Rate

(iii) Resting Respiratory Rate

(iv) Vital Capacity

(v) Body Composition
- Total Body Fat Percentage
- Lean Body Weight

(vi) Breath Holding Capacity
- Positive Breath Holding Capacity
- Negative Breath Holding Capacity

The study was further delimited to the Judokas of a All India Inter University (age ranging from 18-25) and Junior Nationals (age ranging from 14-18).

LIMITATIONS

1. **Daily routine, food habits and social background of the Indian Judokas which might have had an effect on the study, was taken as the limitation of the study.**

2. Non-availability of sophisticated instruments for collection of data was also considered as one of the limitation of this study.
3. Any bias that might have existed due to insincere responses from the subject was also taken as another limitation of the study.

HYPOTHESIS

From the Scholar’s own understanding of the problem and as gleaned through the literature it was hypothesized that in relation to all the selected psychological and physiological variables there will not be significant difference among different weight categories and different age groups.

DEFINITION AND EXPLANATION OF TERM

Judoka

The word Judoka is a Japanese term which means male judo player.
SIGNIFICANCE OF THE STUDY

Physical education teachers, coaches and sports scientists have been trying to develop profiles of various aspects for high sports performance of Judokas. Thus, numerous research work has already been done in this field and the present study will be addition to the existing. Therefore, results of this study will be of immense significance in the following ways:

1. The study may help physical education teachers and coaches to scan the prospective male Indian Judokas.

2. The outcome of the study may be useful in evaluating the degree of adaptive changes that are brought out by such strarious activity.

3. A comparative analysis about the psychological and physiological profiles of Indian Judokas and advanced Judo players (of leading countries) may be drawn from this study.

4. The study may reveal true facts about Indian Judokas.
5. The study may reveal the role played by some crucial factors which determine success in Judo.

6. The study may render help in planning the training programme for Judokas of all weight categories.

7. Results may be helpful for self-assessment of the Judokas.

8. In future due consideration may be given by the selectors to the psychological and physiological variables which are most related to the higher performance.

9. Results may also help the coaches, and sports psychologists to provide correct guidelines to the players.

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