Chapter I

INTRODUCTION

Physical Fitness is one's richest possession; it cannot be purchased, it has to be earned through a daily routine of physical exercise.

It is self-evident that fit citizens are a nation's best asset and weak ones its liability. It is therefore the responsibility of every country to promote physical fitness of its citizens as it is the basic requirement for most of the tasks to be undertaken by an individual in his daily life.

The World Health Organization has set a target that every person in the world should become health-conscious by 2000 A.D.; and it is a right step in the realisation of the objective, 'health for all'. The International Olympic Committee has signed an agreement with W.H.O. for furthering the cause of 'health for all' and 'sports for all' by 2000 A.D. This agreement is clearly directed towards attaining total fitness of all individuals by the end of the century. To attain this objective the citizens of the world are to be made healthy and, fitness-conscious and for this purpose, scientific programmes and criteria to evaluate fitness
are to be formulated to cater to all individuals belonging to both sexes and of all ages.

Many countries have taken physical fitness of their citizens seriously in 19th and 20th centuries. The German Nazis are known throughout the world for their strong nationalistic feeling and the physical development of their citizens. Hitler could not tolerate any one fitter than Germans. Americans also noticed their weak youth during World Wars I and II, and started fitness programmes for their youth. Some of these fitness programmes still continue. Many other countries, influenced by U.S.A. have also started fitness programmes for their youth. Some of these countries are Canada, United Kingdom, France and Japan.

Every human being has the fundamental right of access to physical education and sports which are essential for the balanced development of his personality. The freedom to develop physical, intellectual and moral qualities through physical education and sports

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must be guaranteed both within the educational system and in other aspects of social life.²

History points out that the people and communities which cared for their physique and engaged in various physical activities remained strong and prosperous, whereas those which neglected the health and fitness aspect had waned and perished. The great Roman civilisation crumbled and came to an ignominious end precisely because its people became disproportionately affluent and took to a life of wanton luxury. They lost touch with physical exercises and sports and became soft in mind, flesh and spirit. The lesson is borne out in Rome as it has been in many other civilisations, which have fallen along the way, that for a nation to remain strong and to endure, it must be physically as well as morally fit.³

Barrow⁴ has stated that some of the earlier civilisations of the past such as Spartan, Greek, early Athenian and early Roman realised the values of physical fitness. They showed great interest in the

physical condition (fitness) of their people and included physical training as an important aspect of their education. The greatest thinkers and philosophers of the world have advocated the importance of physical fitness to mankind. Aristotle, the eminent Greek philosopher, emphasised the physical fitness and harmony of body and mind. According to him: body is the temple of the soul and to reach harmony of body, mind and spirit, the body must be physically fit.

It is relevant here to examine briefly the place of physical education in India in the pre-independence period and measures taken towards physical education by the government in independent India.

The story of physical education and sports in India is strewn with ups and downs. In turmoil and war-torn periods, Indian society paid some attention to physical fitness, while in periods of security and relative abundance, it shifted its attention to intellectual and spiritual attainments. As a result of this neglect of the vital aspect of physical strength India has had to bear the brunt of foreign intrusions and invasions till the 19th century, when the British completely subjugated her.¹

For over 150 years the educational system of our country was based on Western science and culture which was primarily academic. Physical education did not find an honorable place in the pattern of education. Activities such as Western Gymnastics, games like Cricket and Football were organised in some schools and colleges.

However, the vyayamshalas, akhadas, and talim khanas provided opportunities to the young and old to take part in indigenous physical exercises. This revival of traditional Indian forms of physical training encouraged a sense of national unity and desire for political freedom.

After the end of the first World War, there was a general awakening in all sections of Indian society. A great need was felt for trained teachers of physical education. To fulfill this demand the Young Mens’ Christian Association in Madras took the lead and established the first College of Physical Education in India in 1920. Trained physical education teachers from that institution have popularised games and sports and fitness programmes throughout the country especially for children and youth attending educational institutions.²

After Independence, the Central Government of India thought seriously about the promotion of physical education and sports and fitness programmes in harmony with the total education pattern and also complementary to the achievement of the goals of general education. To give practical shape to its ideas, different committees were appointed from time to time to draw-up as well as support plans for the development of physical education and sports for the youth of the country.

A national plan of physical education and recreation was first prepared in 1956 by the Union Ministry of Education.\(^7\) This plan provided useful guidelines to form the syllabus of physical education for Primary and Secondary Schools. It defined physical education, its aims and objectives and its place in national life.

In 1959 the Government of India formed a committee under the chairmanship of Dr. H.N. Kunzru to evaluate various schemes of physical education and recreation. The Kunzru Committee\(^8\)

\(^7\) National Plan of Physical Education and Recreation (New Delhi: Govt. of India Press, 1956), p.2.
\(^8\) Report of Kunzru Committee for Coordination and Integration of Schemes Operating in the Field of Physical Education, Recreation, and Youth Welfare, Ministry of Education, Govt. of India (New Delhi: Govt. of India Press, 1964).
recommended an integrated programme of physical education with a uniform compulsory curriculum for all.

The first All India Seminar on Physical Education for the Principals of Physical Education Institutions was held in the year 1958 at the Young Men Christian Association, College of Physical Education, Madras. The purpose of the Seminar was to draw up sound principles and procedures to develop physical education and recreation on a nation-wide basis. The seminar also suggested the conduct of the physical fitness test as prescribed in the National Plan at various places in the country to ascertain its validity and to set norms for different age groups.  

An All India Seminar for State Inspectors of Physical Education and the University Directors of Physical Education was held at Mahabaleswar in 1958. It was organised by the Union Ministry of Education. The objective of the Seminar was to discuss the then existing system of inspection and supervision of physical education and also to discuss the development of physical education activities at college/university level and in rural areas. The seminar recommended

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9 Report of All India Seminar on Physical Education for Principals of Physical Education Institutions, Ministry of Education, Govt. of India (New Delhi: Govt. of India Press, 1959), p.19.
the inclusion of physical education as one of the curricular subjects in
schools and at all levels on par with the other subjects.\textsuperscript{10}

National Physical Efficiency Drive\textsuperscript{11} was launched in 1959-60 by
the Union Ministry of Education with an aim to create fitness-
consciousness and enthusiasm among the people of our country for
better and healthy living. In order to put the scheme on more scientific
lines and on a sound footing. It was entrusted to the Lakshmibai
National College of Physical Education, Gwalior, in the year 1972. This
scheme was renamed as “National Physical Fitness Programme”
(NPFP) to make it more effective in the country.

This programme had two batteries namely ‘A’ and ‘B’. The ‘A’
battery with athletic events consisted of 100 meter run, 800 meter run,
long jump, high jump and putting the shot. In the ‘B’ battery some of the
athletic field items were replaced by indigenous items like dands,
baitkhaks, carrying weight etc. so that youth from rural areas could also
take part. This alternative battery was also useful to youths from rural
area not having experience and facilities for items drawn from athletics.

\textsuperscript{10} Report of All India Seminar on Physical Education for State Inspectors and
University Directors, Ministry of Education, Government of India (New Delhi: Govt. of
India Press, 1959), p.36.
\textsuperscript{11} National Physical Efficiency Drive, Ministry of Education and Youth Services
A participant could select either of the batteries according to his/her choice. He/she had to take part and give a minimum performance (as laid down) in each item before qualifying for any award. Depending upon the performance one was awarded star pins namely one star, two star and three star alongwith certificate. Twenty National Awards were also given to the twenty top performers each year in the National Physical Efficiency Test.

Though, the items had been changed the ‘A’ battery, however, consisting of purely athletic items, had been more or less constant. The ad-hoc norms prescribed for three levels of recognition had remained unchanged. Attempts to evolve norms on scientific basis was not successful.

The National Physical Efficiency Drive included some athletic events in ‘A’ battery. A physical fitness test battery should avoid skilled items. Motor Fitness Test batteries including the American Association of Health, Physical Education and Recreation (AAHPER) Youth Fitness Test are without skilled items.

A consensus arrived at in the meeting of State Ministers of Sports, Presidents of State Sports Councils and President Members of
All India Council of Sports, held in 1974 expressed their view on a broad basis for sports and games from the grass root level that is, block level, and also seriously considered the possibility of making physical education, sports and games compulsory at school level.\(^{12}\)

The National Policy framed in 1980 recommended that physical education and sports must be made a compulsory subject in all schools and colleges. At least two disciplines in sports must form an essential subject in the educational institutions.

The National Education Policy which was designed by the Government of India in 1985 also gave adequate importance to the programmes of physical education and physical fitness at the institutional level and stipulated that every educational institution should have adequate sports facilities and scientific programmes to enable every school-going child to participate in games and sports and fitness activities of his/her choice.\(^{13}\)

In order to spread the concept of mass sports and physical fitness for all, the Government of India sponsored programmes such as

\(^{12}\) Draft National Sports Policy, Ministry of Education and Culture, Govt. of India (New Delhi: Govt. of India Press, 1980),p.35.

"Run for Health," "Sports for All" and "Mass Gymnastics" (Bharatiyam). In order to involve masses in these programmes of mass fitness, concentrated efforts were made through the Sports Authority of India, New Delhi, to train teachers from different states in mass fitness activities.\textsuperscript{14}

In all the programmes of mass physical fitness, there are three important ingredients. The first is a statement of aims and objectives of the programme; the second, planning and implementation of the programme to help in the attainment of the aims and objectives and finally, an evaluation of the results yielded by the programme in terms of pre-determined aims and objectives. Thus, tests provide an essential and useful feedback regarding the effectiveness of a programme. Implicit in the feedback provided by the test scores are possible explanations regarding the weaknesses in the programme, if any.

Tests also provide the scores which form the basis of development of norms, which give meaning to the test scores. The students' raw scores may be interpreted either in terms of norms (norm referenced evaluation) or in terms of a predetermined criterion (criterion referenced evaluation). Whatasoever be the purpose of interpretation

\textsuperscript{14} Uppal, \textit{Physical Fitness - How to Develop} , p.3.
and evaluation, norms have a vital role in all physical education programmes.\textsuperscript{15}

While a number of physical education teachers in schools and colleges of Andhra Pradesh conduct tests to ascertain the status for the physical fitness of their students, the absence of related norms seems to be a big drawback. The present study was an effort towards filling up this void.

Statement of the Problem

The purpose of the study was to establish norms for physical fitness components for boys from 13 years through 18 years of Andhra Pradesh and the present study was entitled as, "Establishment of Norms for Physical Fitness Components for Male Teenagers of Andhra Pradesh."

Delimitations

The present study was delimited to the following areas:

1. The age was delimited to 13 to 18 years only.

2. The study was conducted only on the male students.

3. The present study was confined to the AAPHER Youth Fitness Test Battery.

**Limitations**

The following limitation was observed during the conduct of present study, which were beyond the limits of the research scholar.

The research scholar did not adopt any motivational technique so as to enable the subjects to put up their best performance while performing different test items of AAHPER Youth Fitness Test. However, the subjects were exherted to do their best while undertaking tests. Inspite of this, if subjects did not put in optimal effort while performing tests, it was considered as a limitation of the study.

**Definitions and Explanations of the Terms**

**Norms**

1. According to Mathews\(^{16}\) "Norm is a standard with which an obtained score may be compared."

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2. According to Johnson and Nelson\textsuperscript{17} "Norms are values considered to be representative of a specified population. A test that has accompanying norms is definitely preferred to one that does not. Norms are usually based on age, grade, height or various combinations of these characteristics."

3. According to Barrow and Mc Gee\textsuperscript{18} "Norm is a scale that permits conversion from a raw score to a score capable of comparisons and interpretations. If a test is accompanied by norms, its usefulness is enhanced. Its characteristics of average and range are known.

**Physical Fitness**

1. According to Clarke\textsuperscript{19} "Physical fitness is an ability to carry out daily tasks with vigour and alertness without undue fatigue and with ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies."

2. Mathews\textsuperscript{20} defined "Physical fitness as the capacity of an individual to perform a given physical task involving muscular effort."

For the purpose of this study, physical fitness is understood to comprise of physical abilities namely speed, strength, agility, muscular endurance and cardio-vascular endurance.

**Teenagers**

1. The New International Webster's Comprehensive Dictionary\textsuperscript{21} defined that the "Teenagers are ranging from 13 years to 19 years."

2. The New Oxford Illustrated Dictionary\textsuperscript{22} defined "Teenager, person in the teens. Teens- years of Person's age from 13 to 19 years."

For the purpose of the present study boys from 13 to 18 years were considered as teenagers.

\textsuperscript{20} Mathews, *Measurement in Physical Education*, p.4.
Strength

1. Barrow and Mc Gee\textsuperscript{23} defined "Strength as the capacity of the individual to exert muscular force."

2. According to Jensen and Fisher\textsuperscript{24} "Strength is the ability of the muscles to exert force against resistance."

3. Mathews\textsuperscript{25} defined "Strength as a force that a muscle or a group of muscles can exert against resistance in one maximum effort."

4. Johnson and Nelson\textsuperscript{26} defined "Strength as the muscular force exerted against movable and immovable objects."

For the purpose of this study strength is considered as the ability of a muscle or of a group to exert force against resistance.

\textsuperscript{23} Barrow and Mc Gee, \textit{A Practical Approach to measurement in Physical Education}, p.112.
\textsuperscript{25} Mathews, \textit{Measurement in Physical Education}, p.5.
\textsuperscript{26} Johnson and Nelson, \textit{Practical Measurement for Evaluation in Physical Education}, p.94.
Cardio-vascular Endurance

1. According to Willgoose\textsuperscript{27} “Cardio-vascular endurance also referred to as cardio-respiratory endurance; is a kind of physiological fitness demonstrated through an adjustment of the heart and lungs to prolonged physical exertions.”

2. Johnson and Nelson\textsuperscript{28} described “Cardio-vascular endurance as the ability of the circulatory and respiratory systems to adjust to and to recover from the effects of exercise and work.”

3. Hockey\textsuperscript{29} defined “Cardio-vascular endurance as “maximal amount of work that an individual can perform over an extended period of time.”

For the purpose of the present study, cardio-vascular endurance is considered as the ability of the cardio-respiratory system to sustain a work for prolonged period of time.

\textsuperscript{28} Johnson and Neison, \textit{Practical Measurement for Evaluation in Physical Education}, p.142.
Muscular Endurance

1. Willgoose\textsuperscript{30} defined "Muscular endurance as the "ability of a muscle or a muscle group to maintain submaximal contraction over a period of time."

2. According to Mathews\textsuperscript{31} "Ability of a muscle to work against a moderate resistance for long periods of time is termed muscular endurance.'

3. According to Johnson and Nelson\textsuperscript{32} "Muscular endurance may be either dynamic or static in nature and concerns the ability of a muscle to repeat identical movements or pressures, or to maintain a certain degree of tension over a period of time."

Speed

Johnson and Nelson\textsuperscript{33} defined "Speed of movement as: "The rate at which a person can propel his body or parts of his body through space."

\textsuperscript{30} Willgoose, \textit{Evaluation in Health Education and Physical Education}, p.156.
\textsuperscript{31} Mathews, \textit{Measurements in Physical Education}, p.5.
\textsuperscript{33} Ibid.,p.245.
Barrow and Mc Gee\textsuperscript{34} defined speed as "The capacity of an individual to perform successive movements of the same pattern at a fast rate.

For the purpose of the present study, Speed is considered as the capacity of the individual to perform successive movements of the same pattern at a fast rate.

**Agility**

Barrow and Mc Gee defined "The ability of the body or parts of the body to change the direction rapidly and accurately."\textsuperscript{35}

According to Johnson and Nelson "Agility is the physical ability which enables an individual to rapidly change body position and direction in a precise manner."\textsuperscript{36}

For the purpose of the present study, agility is considered as the ability of the body to change direction with minimum loss of speed.

\textsuperscript{34} Barrow and Mc Gee, *A Practical Approach to Measurement in Physical Education*, p.112.
\textsuperscript{35} Ibid.,p.562.
\textsuperscript{36} Johnson and Nelson, *Practical Measurement for Evaluation in Physical Education*, p.245.
Significance of the Study

No two individuals are alike. Individual differences make every physical education class a heterogeneous group. Therefore, no one programme of physical education can be ideal for all, unless the deficiencies of individuals are known to the teachers. With the availability of norms, the coaches and physical education teachers in schools can determine the fitness status of the individual students and know the exact need of each individual. Thus a norm serves the purpose of a barometer to indicate the state of affairs with respect to the physical fitness of a student. The present study may be helpful in the following ways:

1. This study may be useful in the evaluation of the fitness level of various age groups of male students ranging 13 to 18 years.

2. The study may provide a basis to prospective researchers for comparing fitness standards of the adolescent population of Andhra Pradesh.
3. The physical education teachers and coaches at school level may be provided with a standard yard stick for different age groups for improving the fitness of the youth by taking appropriate measures.

4. The study may reveal to the youth their standard of fitness in relation to their performance age and also help the parents to know about the fitness of their children.

5. The study may play a significant role in the shaping of physical education programmes by the administrators of the state.