CHAPTER I

INTRODUCTION

The profession of physical education is entering in one of the most exciting, dynamic eras in its history. Physical education is not only concerned with the physical outcomes that acquire from participation in activities but also the development of knowledge and attitudes conducive to life-long learning and participation.¹

Aryans retain many of their old customs, from which we may deduce that they were mainly hunters and engaged in primitive forms of dancing to accompany their celebrations. Physical fitness was probably maintained by the rigors of their outdoor life. Indo Aryans were a strong, warlike race, skilled in the use of the bow, spear and battleaxe and adept at riding horses and driving chariots. Their industry and energy helped them to dominate and displace the local people. While there natural inclination for physical activities led them to develop their physical powers and skills in a spontaneous, natural way.²

Towards the end of the Vedic period an important development took place, which has affected the course of physical education in India right down to the present day. This was the practice of ‘Pranayama’ or the holding of

² Eraj Ahemad Khan "History of Physical Education" (Patna, Scientific publishing House, 1985), P. 316, 317.
breath before each prayer; this was considered beneficial for the lungs and a means of prolonging life, and was to develop into the Yoga Asanas. Its significance is that it recognizes that calm control, as well as violent physical exertion can promote physical health. A series of physical exercises known as the 'Suryanamaskar' was also devised to improve the physical condition of the body and the breathing mechanism in good order. Another feature of Vedic civilization was training in the use of lathi, with which a young man was expected to defend himself in case of emergency. At a special ceremony, known as 'danda-pradana', to mark a youth's coming of age, he was presented with a lathi, which then accompanied him wherever he went.  

The Epic Age is that covered by the period associated with the Ramayana and the Mahabharata. The former deals with the Great War hero Rama and the latter with the great war between Kauravas and the Pandavas. From these we gather the period was one of the great conflicts and bloodshed, and can deduce that physical training was directed mainly towards military training – Archery, Javelin and Spear-throwing, Fighting with the Sword and Battle-axe. These epics, do however, mention Wrestling, Swimming and Dancing. Bheema, Jarasandha, Krishna and Balram will be remembered as legendary heroes of the wrestling arena. At modern Rajgir

\[\text{Ibid. P. 318.}\]
there is a wrestling pit known as the Jarasandha ka Akhara', a survival from ancient times. 4

The Hanuman Vyayam Prasarak Mandal was founded in 1914 at Amravati by the two Vaidya brothers. Since its foundation the Mandal has played an important role in promoting the cause of physical education in India. The Mandal gained popularity because of its policy to revive coalitional Maharashtrian exercises. The daily programme consisted of regular practice in the use of Sword and Spear, Lathi and Baneti, Patta and Lezim and other Combative exercises. The Yoga asanas were also cultivated5.

Barrow6 stated that some of the earlier civilizations of the past, such as Spartan, Greeks, early Athenian, Greeks and early Romans realized the values of physical fitness. They showed great interest in the physical fitness of their people and included Physical training as an important aspect of their education.

The national concern for raising the status of India in the international sports field provided a base for political support for providing an organizational structure for a firm footing for physical education and many state governments had come forward to accept physical education as a required subject in their school curriculums. The Central Board of Secondary

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4 Ibid. P. 318.
5 Ibid. P. 339, 340.
Education took the lead in introducing physical education as an academic subject at the school level. This decision was taken at the Board's Conference held at Mysore from 28th to 30th November, 1971. It appointed a committee of experts with Shri S.D. Chopde as its Chairman to frame a curriculum of physical education and finally adopted a fairly well planned curriculum. It was first introduced as an elective subject in the three years course of All India Higher Secondary Education. Later it was introduced as a required common subject, in the scheme of studies for classes 9th and 10th under the new ten-year pattern of high school education followed by two years of higher secondary education.\(^7\)

Physical fitness plays a very important place in the curriculum of physical education. Among the various objectives of physical education such as healthy participation in games and sports, as cultural heritage, that develops qualities conducive to social and national unity, mental alertness, maturity and citizenship. The objective of physical fitness can be realized only through a programme of physical education, whereas in the realizations of other areas in the school curriculum may also play their parts. Physical fitness is also essential for achieving better success in other areas of Education.\(^8\)

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Nixon and Cozen\textsuperscript{9} described early men as physical educator. They developed physical skills involving running, jumping, throwing and climbing etc. in youth for survival. The components of physical fitness used by primitive men are used even today.

"A fit man is one who is well adapted to his environment, whose mind and body are in harmony and who can meet the normal demands made on him both mentally and physically without undue fatigue"\textsuperscript{10}

The world's leading philosophers have stressed the importance of physical fitness in living a productive and meaningful life. The Greek Philosopher, Aristotle stated that the body is the temple of the soul and to reach harmony of body, mind and spirit, the body must be physically fit\textsuperscript{11}.

To summaries, physical fitness tends to be defined by the contemporary advancements in skills imparted to the individuals, with insights towards probable future trends. Mathews,\textsuperscript{12} in a broad sense, elaborates on physical fitness as the "capacity of an individual to perform given physical tasks involving muscular effort." Troester Jr.\textsuperscript{13} States that "physical fitness includes those qualities which will permit an individual to perform life activities involving


speed, strength, agility, power and endurance and to engage in various kinds of physical activities required of modern-day living, including sports and athletics, and to be able to maintain optimum amount of fitness for the individual involved."

Hunter\textsuperscript{14} elaborately defines physical fitness as "work capacity, the total functional capacity to perform some specified task, requiring muscular effort, considers the individual involved, task to be performed, quality and intensity of effort; one aspect of total fitness; involves sound organic development, motor skill, and the capacity to perform physical work with biological efficiency." Such insights of the time provide material for the evolution of discipline. Physical fitness is in effect, the involvement of muscular movement or a series of movements in co-ordination with the cardio-respiratory system of an individual to perform any kind of task. Such performance is, also, governed by numerous inherent determinants. Such inherent determinants, on being isolated at various times, provide for the growth of the discipline of physical fitness, consequent to which the performance of an individual is deemed to be enhanced and appreciated.

Physical fitness is more than cardiovascular fitness. Most experts agree that fitness has many different components of which cardio-vascular fitness is

only one. From a public health perspective strength, muscular endurance, flexibility and body composition, also, merit considerations.\textsuperscript{15}

Physical fitness is a positive quality, extending on a scale from death to "abundant life". All living individuals, thus have some degree of physical fitness, which varies considerably in different people and in the same person from time to time. Physical fitness is an essential quality of man.\textsuperscript{16}

According to Williams\textsuperscript{17} "physical fitness is essential not only in terms of general health, but also for the special physical requirements, for competitive sports and certain highly specialized and demanding occupations as a result of current work, particularly in the field of ergonomics and physical education, it is becoming increasingly obvious though, not generally appreciated that the achievement and maintenance of high levels of physical fitness produce significant efforts on the working of the human body."

The use of fitness tests has been strongly recommended in schools because it is assumed that they motivate children to become more fit. Fox and Biddle\textsuperscript{18} discussed the use of fitness testing in schools. They recommended that (i) the fitness test be selected with great care because it communicates to the children and their parents, what fitness is, (2) the


teacher should recognize that fitness test scores are influenced not only
exercise habit, but also by maturation, genetic ability, skill, level of motivation
and test conditions, and (3) that teachers should not only concentrate so
much on the product of fitness by emphasizing fitness norms and
comparisons among children, rather, fitness testing should be viewed as a
means of monitoring progress toward personal fitness goals that can be
achieved by participation in realistic exercise programmes.

Physical fitness is an inseparable part of sports performance and
achievement. The quality of an individual sportsman's fitness in terms of its
utilization value, is directly proportional to the level of fitness, the greater the
ability of a person to attain higher level of performance e.g. the differences
between Chinese and Russian Gymnasts, they are having same techniques
and skills but regarding physical fitness Chinese are better than Russian
Gymnasts. In the arena of international competitions, one can hardly
differentiate the top-notch contents for one another in terms of level of fitness.
However, the deciding factor sometimes remains with fitness for effective
living has interdependent components involving intellectual, emotional as well
as physical factor.19

In recent years more and more attention has been paid to nature of
"Physical Fitness" not only in terms of general health but also, of the special

19 American Medical College Association and American Association of Health, Physical
Education and Recreation. "Exercise and Fitness" Journal of Health, Physical
Education and Recreation 35 (May 1964): 43.
physical requirement for competitive sports and certain highly specialized and
demanding occupations. As a result of current work, particularly in the field of
ergonomics and physical education, it appreciated that the achievement and
maintenance of high levels of physical fitness, produced significant efforts on
the working of human body.  

Winning laurels at international sports arenas has become a prestige
issue; linked with political system and as such nations vie with each other to
produce top class sportsmen, for international competitions. For this, research
is systematically conducted to identify the factors that help in achieving level
of skill, which a player can attain through proper coaching and evaluation.

Sports science has enabled modern youth to develop physical capacities,
beyond certain expected levels. Sports have become highly competitive and
records are being broken every day with greater rapidity.

According to Featherstone modern civilization has made life soft and
luxurious. The diminished physical efforts and artificial life is responsible for
physically weak population. People, today, lack both strength and endurance.
The average man spends more time in attending his automobiles than in
attending his body.

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20 Ibid., p.44  
21 Vidyacharan Shukla, "Messages Abstracts International congress of Sports
Science", (Patiala Netaji Subhas National Institute, of sports, November 1982) p 37
22 Indira Gandhi, "Message Abstracts International Congress of Sports Sciences",
23 Donald F. Featherstone, "Be Fit at 40, The mature mans Guide to Physical Fitness",
Warren and Guild\textsuperscript{24} continue that modern technology has lessened physical activities and it is difficult to maintain adequate muscle tone. The psychological strains of domestic routine and the working environments demand physical fitness.

Canadian Commission for UNESCO\textsuperscript{25} recommends that "Physical education and sports is the birth right of every child." Every human being has a fundamental right to access to physical education and sport, which are essential for the full development of his personality.

Sunderarajan\textsuperscript{26} opined that in modern times, the term physical fitness is almost replaced by the term functional fitness, composed of the perfect blend of physical, physiological and psychic components in appropriate proportions according to the varying demands of functional needs of requisite type, with an ability to complete the task comprehensively.

When there is perfect harmony between body and mind, we achieve self-realization. Yoga teaches us that obstacles in the path of our self-realization indicate themselves in physical or mental indisposition. When our physical state is not perfect, this causes an imbalance in our mental state, which is known in Sanskrit as chittavritti. The practice of yoga helps us to overcome that imbalance. Yogic asanas, or postures, can cure vyadhi or

\textsuperscript{24} Ibid., p. 1
physical ailments, and redress angamayatva or unsteadiness in the body. Shvasa-prashvasa, which translates as "uneven respiration" – an indication of stress – is alleviated by the practice of yoga. Asanas tone the whole body. They strengthen bones and muscles, correct posture, improve breathing and increase energy. This physical well-being has a strengthening and calming impact on the mind.  

Practising asanas cleanses the body. Just as a goldsmith heats gold in fire to burn out its impurities, similarly, asanas by increasing the circulation of blood through the body, purge it of the diseases and toxins which are the consequences of an irregular lifestyle, unhealthy habits, and poor posture. Regular practice of the stretches, twists, bends, and inversions – the basic movements of asanas – restores strength and stamina to the body. Asanas, together with pranayama, or the control of breath, rectify physical, physiological, and psychological disorders. They have a positive impact on the effects of stress and disease. Among the many ailments that benefit from the practice of asana is osteoarthritis, high and low blood pressure, diabetes, asthma, and anorexia.  

Exercise usually involves quick and forceful body movements. It has repeated actions, which often lead to exertion, tension, and fatigue. Yoga asanas, on the other hand, involve movements which bring stability to the

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Ibid. p.10.
body, the senses, the mind, the intellect, the consciousness, and finally, to the conscience. The very essence of an asana is steady movement, a process that does not simply end, but finds fulfillment in tranquility. Most diseases are caused by the fluctuations in the brain and in the behavioral pattern of the body. In yogic practice, the brain is quietened, the senses are stilled, and perceptions are altered, all generating a calm feeling of detachment. With practice, the student of yoga learns to treat the brain as an object and the body as a subject. Energy is diffused from the brain to the other parts of the body. The brain and body then work together and energy is evenly balanced between the two. Yoga is thus termed sarvaanga sadhana or “holistic practice.” No other form of exercise so completely involves the mind and self with the body, resulting in all-round development and harmony. Other forms of exercise address only particular parts of the body. Such forms are termed angabhaga sadhana or “physical exercise”.29

The increase in the number of fitness participants is attributed primarily to scientific evidence linking vigorous exercise and positive lifestyle habits to better health and improved quality of life. Unfortunately, the current American way of life does not provide the human body with sufficient physical exercise to maintain adequate health. Furthermore, many present lifestyle patterns are such a serious threat to our health that they actually increase the deterioration rate of the human body and often lead to premature illness and mortality.

29 Ibid. p.18.
Although people in the United States are firm believers in the benefits of physical activity and positive lifestyle habits as a means to promote better health, most do not reap these benefits because they do not know how to implement a sound fitness program that will indeed yield the desired results. According to the U.S. Department of Health and Human services, less than half of the adult population in the United States exercises regularly and only 10 to 20 percent exercise vigorously enough to develop the cardiovascular system.  

Many research findings have shown that physical inactivity and negative lifestyle habits are a serious threat to an individual’s health. Movement and activity are basic functions needed by the human organism to grow, develop, and maintain health. However, physical activity is no longer a natural part of our existence. We live in an automated world where most of the activities that used to require strenuous physical exertion can be accomplished by machines, with the simple pull of a handle or push of a button. Similarly All modern-day commodities that minimize the amount of movement and effort required by the human body. One of the most significant detrimental effects of modern-day technology has been an increase in chronic conditions, which are related to a lack of physical activity (e.g., hypertension, heart disease, chronic low back pain, and obesity). These conditions are also referred to as hypo kinetic diseases. The term "hypo" implies low or little, and

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"kinetic" implies motion. While lack of vigorous physical activity is a fact of modern life that most people can no longer avoid, if we want to enjoy many of the commodities and still expect to live life to its fullest, a life time exercise program must become a part of daily living. Negative effects on human health are nutrition, stress and environment. Fatty foods, sweets, alcohol, tobacco use, excessive stress (distress), and pollution in general have detrimental effects on people. As the incidence of chronic diseases increased, it became obvious that prevention was the best medicine, when dealing with these new health problems. All deaths in the United States prior to the age of sixty-five are preventable. Most Americans are threatened by the very lifestyles they lead today.\(^{31}\)

Physical Education teachers working in schools are in best position to help the nation in raising the fitness level of youths. They need tests to assess the physical fitness of students. Norms, if prepared can make testing more scientific and accurate.

No solid step has been taken in this direction. It is the responsibility of the Physical Education professionals to come forward and break the ice so that fitness programme becomes a part and parcel of school life. Lot of research work is needed initially in different regions to prepare appropriate norms. The researcher is making an attempt in this line by preparing norms for the boys of grade V to IX of schools from Gujarat State.

\(^{31}\) Ibid. p.2,3.
Statement of the Problem

The purpose of this study was to develop physical fitness norms for school boys in grades five to nine of Gujarat State.

Delimitations

1. The study was delimited to male students of grades five to nine and was also delimited to five age groups i.e. 11-12, 12-13, 13-14, 14-15, and 15-16 years.

2. Study was further delimited to use of AAHPER Youth Fitness Test for measuring physical fitness of schoolboys of grades five through nine of Gujarat State.

Limitations

1. As the investigator had involved large number of subjects, the assistance of a number of physical educationists was taken for collection of data. Although every attempt was made to standardize the testing procedure, yet there could be variations in taking performance of subjects. Thus, variations in measuring performance, due to individual differences, which might have had an effect on the study, were considered as a limitation.

2. Since the test was not conducted on the same days and during same hours of the day, the variations might have had an effect on
the performance of the subjects, which was, also, considered another limitation of this study.

Definition and Explanation of the Terms

Physical Fitness

Clarke, defined "Physical fitness" is the ability to carryout daily tasks with vigor and alertness, without undue fatigue and with ample energy to leisure time pursuits and to meet unforeseen emergencies."

Lorin stated that "physical fitness is that condition of the body which will permit the youngster to maintain good health, respond favorably to physical effort and physical stress, enjoy the sensation of his/her own body and function at an optimal mental and physical level."

Reilly defined physical fitness "as the ability to reach high level of performance and the ability to withstand the stresses imposed on the sportsman by his participation. The fitness status at which the training is given may lie anywhere along the continuum of fitness."

For the purpose of this study definition offered by Reilly was accepted.

The above definitions did lead to any quantitative measurement of physical fitness. For the purpose of this study, the physical fitness should

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mean "the composite score of all the performances, in the components of speed, muscular strength and endurance, agility and cardio-respiratory endurance as measured by the different items in AAHPER Youth Fitness Test."

Norms

According to Johnson and Nelson, "the norms are values considered to be representation of a specified population, Norms are usually based on age, grade, height, weight, or various combinations of these characteristics." Barrow and McGee stated norm as a scale that permits conversion from a raw score to a score capable of comparison and interpretations.

Mathews said that a norm is a standard to which an obtained score may be compared.

For the purpose of this study definition offered by Mathew was accepted.

Significance of the Study

The study will be of immense significance in the following ways:

1. The norms prepared by the scholar will not only be useful to the physical education teachers, in evaluating the performance of the

school boys scientifically, but also may be helpful for the students to assess their performances in relation to their physical fitness.

2. The children in the schools are at the growing age. The norms will be a yardstick for the physical education teachers in preparing the programme of physical education suiting to the students of different grades, in the manner that the weakness of the students, is eliminated and at the same time the stronger students are further given a feedback to accomplish higher level of physical fitness.

3. The norms may be of immense help to the physical education teachers and the coaches in identifying the talented boys, who can be trained further for elite level of competition.

4. The norms may provide a reliable and useful basis for interpretations and evaluation of AAHPER test results.