Chapter I
INTRODUCTION

United Nations Educational, Scientific and Cultural Organization (UNESCO) has stated that physical activity and sports are the right of all people, especially, children and youth. Hence, it is the responsibility of the every government to provide an access to participation in activities of physical education and sports for children and youth.

Canadian commission for UNESCO 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 sports, which are essential for the full development of his personality.

The General Assembly of United Nation in its resolution 58/5 of 3rd Nov. 2003 proclaimed 2005 as the International Year for Sports and Physical Education, as a means to promote education, health development and peace.

Thus, it is recommended that measures should be taken to promote the practice of ‘Sport for All’, starting in school, in order to introduce the widespread practice of sport throughout life. Further, each government should ensure that broad and diversified programme of sports for all should take in to consideration the complementary nature of competitive sport aimed at excellence and high achievement on the one hand, and broad-based mass physical education and sport programmes on the other, in the planning of national programmes.

Performance is inherent in competition. According to Renwes, “Performance is a key note of all the sports-its basic principle, as the sports has become prestigious aspect to prove one’s superiority over others”. For this, research is systematically conducted to identify the factors that help in achieving mastery of skill, which a player can attain through proper coaching and evaluation.

Among different games and sports, Table Tennis is the most popular racket sport in the world and the second most popular

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participation sport. A sport with over 20 million active participants in the U.S. alone and, as of 1988, an Olympic sport.\textsuperscript{4}

Table Tennis is a popular and extremely fast indoor game. It probably began with students of English Universities, but some say it was started in India by British Army Officers, hitting little balls over line of books spread across the middle of a table in imitation of lawn tennis in the 1890’s.

By about 1900, it became very popular in England and the United States. At that time, it was played with a celluloid ball and with hallow banjo shaped rackets covered with Vellum (a material like sponge paper), the noise of which gave rise to its best-known name at that time—"PING-PONG". After sometime, interest in the game died down until after World War I, when it was revived in England and Wales.

Rules for playing Table Tennis were drawn up, and in 1927 the English Table Tennis Association was founded. Gradually, the game grew in popularity all over the world and now-a-days players from some

\textsuperscript{4} Larry Hodges, \textit{Table Tennis, Steps To Success} (Champaign, Illinois: Human Kinetic Publishers, 1993), p.1
40 countries take part in the world championships. Now more than 10,000,000 players belong to clubs which come under the International Table Tennis Federation.

Table Tennis is played on a hard smooth table, usually green or blue, nine feet long and five feet wide, standing two and a half feet above the floor. The net across the middle is slightly wider than the table and six inches high. The balls are light, hollow and made of celluloid. The racket is made of the natural wood. Both the faces of the racket are covered with soft rubber. After the introduction of sandwich rubber, it has become an extremely speedy game.

Table Tennis can be played by a young and old person that's why it is called as "LIFE TIME SPORT".  

Table Tennis Federation of India (T.T.F.I.) is a governing body in India to promote the game of Table Tennis. T.T.F.I has contributed in its own way with regard to development as well as improvement of this game but still a lot remains to be done. T.T.F.I is now looking forward to

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bring professionalism in Table Tennis so that young players can motivate themselves to achieve the highest level of play.⁶

For bringing improvement in the standard of play, role of coaches cannot be undermined. A coach’s aim is to find the most economical way of causing a player to become a better player in the widest possible sense. This improvement may relate to the player’s understanding of the game or to the development of his technique. More likely, it concerns players capabilities must be interdependent.⁷

Testing the amount of knowledge gained, skill developed and attitudes has an important function of teaching/coaching any subject or a sport. A problem of testing is much more complicated in physical education as the factors affecting acquisition of physical skills are too numerous such as physical fitness, co-ordination, motivation, intelligence etc., besides instruction received from well planned schemes of lessons. Further, the criterion behaviour in testing physical skills cannot be


graded objectively as these are dependent on the situation, circumstances and playing skills of the players as well as of the opponents.\textsuperscript{8}

Even though Tests and Measurements is a subject in training teachers of physical education and sports, the process of grading students even in physical education colleges most often leads to dissatisfaction in students on the score of “Fairness”. Further, the selection of players at the school, club, state and national level are most questioned as lacking full proof criteria. This only shows either the area of tests and measurements in sports has not developed enough to provide a fairly good procedure of measuring the amount of playing ability in the players or there is a lack of will on the part of teachers, coaches and selectors in applying the scientific procedures prescribed in the literature on test and measurements.\textsuperscript{9}

Evaluation is an essential element in teaching/coaching process. Through evaluation, a teacher can know the extent to which a student has learned the lesson. Therefore, the teacher must be aware of some

\textsuperscript{8} T.S. Brar, \textit{“The Evaluation of Objective Skill Test of Hockey”} (Unpublished Master’s Degree Thesis, Jiwaji University, Gwalior 1975).

evaluation techniques, which will enable him to measure his skills, objectively that may help him to classify. Further, a teacher/coach can measure the progress made from time to time.

There is a close-knit relationship between skill and performance. That is why, now-a-days much greater emphasis is placed on the practice of and mastery over the basic skills of a game right at the very beginning. Simple skills are not only easy to learn but are also easy to evaluate more objectively. Complex skills, on the other hand, are learned only after simple skills are perfected and that is the reason why they are difficult to evaluate more objectively.

In measurement and evaluation literature, a number of methods of skill evaluation have been mentioned. Some methods are objective while others are subjective. Some are valid and reliable, while others are not. The obvious reason is that simple skills are easy to evaluate, while complicated ones are difficult to assess. The qualitative aspect of a skill performance is not easy to test objectively.

Measurement of playing ability has two alternative procedures, namely, skill testing through simulated test items and ranking of the
players by standing in round robin tournament in actual game situation. Though ideally, the rating of playing ability provides a more comprehensive and accurate measure. But the practical problems of getting qualified judges and lack of uniformity in different situations prevent wide use of this method. Skill testing through simulated items, on the other hand, can be standardized, is easier and provides objective measure of playing ability. The need of validating such skill test against sound criterion is usually and quite successfully met by using judges rating of playing ability or tournament ranking as the criterion. Essential features of good sport skill test include a minimum acceptable reliability, validity, easy and accuracy of scoring.\textsuperscript{10}

Sports skill test are designed to measure the basic skills used in the playing of a specific sport. Because of the wide range of skills in most sports, a selection of the most important skill is invariably necessary. The selection is usually based keeping in mind the literature available, opinion of experts as well as by applying appropriate statistical techniques. The skill items collectively are called test battery. The skill test helps the students to evaluate their performance in the fundamental

skills the game and to provide an incentive for improvement. The test also serves the purpose of helping the teachers to measure student’s performance and to evaluate their own teaching procedure and programme.\textsuperscript{11}

Skill test reflect the ability of the students to play such games as Football, Cricket, Hockey, Basketball, Badminton, Table Tennis etc. The performance scores of a student will help the teacher to determine the progress and awarding their grades. It would help the teacher to place the students objectively in homogenous groups.\textsuperscript{12}

Skill test may be used to measure achievement in the particular sports activity. This information may be used to help to evaluate the instruction programme in terms of the effectiveness of the teaching methods and the strengths and weaknesses of the course content. Skill tests enable each student to objectively, plot his individual progress throughout the course and, conceivably, from one year to the next. Skill tests can be used for diagnostic purposes by pointing out needs for


\textsuperscript{12} Edward F. Voltmer and Aurther A. Esslinger, \textit{Organisation and administration of Physical Education}, p. 508.
special emphasis at each particular grade level in which a sport is taught. In some cases, skill tests can be used for competition in intramural programs and for rainy day activities. Skill tests can well provide effective motivation for continued and intensified participation in the activity.\textsuperscript{13}

Among the earliest reported sports skill tests were the Athletic Badge Tests devised in 1913 by the Playground and Recreation Association of America. The test items pertained to the sports of volleyball, tennis, baseball and basketball. In 1918, Hetherington developed tests for the California decathlon which made use of a graduate score plan. In 1924, Brace reported a six-item skill test in basketball, and a year later, Beall completed an experimental study in tennis to determine a battery of tests for that sport. Increasing interest in testing of sports skills was evident in the 1930s, and throughout the following thirty years many fine tests were proposed, developed and utilized by physical educators. However, for many years there had been an often expressed need for nationally standardized tests. This lack of national standards had been frequently cited as one of physical

education's biggest failings. In response to this need, AAHPER initiated a sports skills test project in 1959 to determine standards for at least fifteen sports activities. This project began under the direction of the Research Council of AAHPER, with David K. Brace serving as test consultant and Frank A. Sills as chairman. The tests and norms have made it possible to more effectively evaluate skill performance, bring about greater motivation and improve teaching.\textsuperscript{14}

In India, the national plan of physical education and recreation was finalized in 1956; which suggested the norms for National Physical Efficiency Tests.\textsuperscript{15} The first all India seminar on physical education for principals of physical education institutions in 1959 also recommended the motor ability tests as prescribed in the national plan to be conducted in various places in the country.\textsuperscript{16}

National norms on basic skills tests are vitally needed in each sport. These data would provide criteria for the grade placement of

sports. Although sufficient diversity would be required to cover a wide range of sports, a procedure similar to the reading readiness test would appear feasible. The most advantageous time to start teaching a sport and the time when diminishing returns warrant its discontinuance could both be determined. It is ironic that physical education with the most objective test possibilities should be so subjective a subject matter field.¹⁷

Norms are performance standard based on the analysis of data, not on a subjective standard chosen by a teacher. If norm-referenced standards are being used, norms are the type of standard. Norms are developed by gathering scores of a large number of individuals of similar age, gender, ability and other characteristics to the subjects with whom the norms will be used. These data are statistically analyzed and performance standards are then constructed on the basis of the analysis. Norms have many advantages over other types of standards. First, they are unaffected by the performance of the group or the class being evaluated. Another advantage is that new performance standards need not to be developed each year as norms once developed can be used for 2 to 5 years. Also, because the same standards are used to evaluate several

different groups or classes of students, the grades have a high degree of consistency- a given grade indicates the same degree of ability for each group.\textsuperscript{18}

A 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. A word of caution should be stated about norms. They should not be accepted at face value. Norms are representatives of some larger population. They should be based on a particular type of group that is well-identified.\textsuperscript{19}

Norms are values considered to be representatives of a specified population. A test that has accompanying norms is definitely preferred to one that does not. They provide information for the student and the teacher to enable them to interpret the student’s score in relation to the scores made by other individuals in the same population. An


understanding of what constitutes the "same population" is necessary in order to intelligently use norm tables.

Norms are usually based on age, grade, sex or various combinations of these characteristics. In norm tables for physical performance there are separate scales for boys and girls; in written tests this distinction is usually not made. The important factor is that the interpretation of norm tables is done in light of the specific group from which the norms were compiled.²⁰

Norms are necessary if the test scores are to be adequately interpreted. There are several types and it depends on the purposes of the test and the characteristics of the group to be tested as to which type is selected. The procedure for developing norms starts with the collection of scores on the test from a large sampling of students from the population for which the test was intended. The large collection of scores can be converted into some type of normative scores. On the basis of

²⁰ Johnson and Nelson "Practical Measurement for Evaluation in Physical Education", p.49.
these norms performance and achievement can be adequately evaluated, scores can be properly interpreted and groups can be compared.\textsuperscript{21}

There is a lack of standardised evaluative skill tests in Table Tennis for assessing the ability, grading and predicting the performance of Table Tennis players. The scholar had undertaken a study in Master of Philosophy in Physical Education, titled "Construction of A Skill Test for Table Tennis Players." The study was appreciated by various people, namely, Officials of T.T.F.I., Senior Coaches posted at NSNIS, Patiala, SAI Coaches, Physical Educators and Players. Everyone desired that had norms were constructed, this would have been an excellent skill test. These responses have been presented through Appendix E to Appendix H. Keeping the response from various quarters, the scholar was motivated to add something worthwhile to the existing test by developing norms. Hence, a study was undertaken to Construct Norms for Skill Test for Table Tennis Players.

\textbf{Statement of the Problem}

The purpose of the present study was to construct norms for Skill Test for Table Tennis Players.

Delimitation

The study was delimited to junior and senior (approximately 400 each) randomly selected male state and national level Table Tennis players of India.

Limitation

Non-availability of sophisticated instruments and the effect of the uncontrollable factors by which the performance of players may be affected, were considered as the limitation of the study.

Definition and Explanation of Terms

Construction

The interpretation or explanation given to an expression or a statement.22

The act of building or developing something.23

Skill

Skill is defined as automatisation of a motor action.24

23 wordnet.princeton.edu/perl/webwn.
Service

In Table Tennis, a serve is used to start a rally. The ball is struck by the server from behind the end line of his side of the table, and must hit the playing surface on his side of the table first (and only once), before going over or around the net, and then bouncing on the opponent's side of the playing surface.25

Push

A push is a backspin stroke (with anything from virtually no-spin to heavy backspin) that is performed from over the playing surface, or close to the end of the table (within 3 feet or so). The bat will hit the ball somewhere between the bottom and the back of the ball, imparting more backspin if the ball is skimmed rather than hit solidly. This stroke is commonly used against no-spin or backspin.26

Counter

A counter generally refers to a stroke played with light to medium topspin, and medium to fast speed. The counter is played from fairly close to the table (less than 3-4 feet in most cases). It is also known as counter hit.

25 http://tabletennis.about.com/od/glossary/g/serve.htm

26 http://tabletennis.about.com/od/glossary/g/push.htm
A counter hit is used to return an opponent's topspin stroke while maintaining good control of the ball, and is usually used to make a less risky return than returning with a reloop.

A counter hitting rally occurs when both players are using counter hits to position themselves for a strong attack.\textsuperscript{27}

**Drive**

A drive in Table Tennis is a stroke that has medium to fast forward speed, and from no topspin to a medium amount of topspin.\textsuperscript{28}

**Test**

A set of questions, problems or exercises for determining the person's knowledge, abilities, aptitude or qualifications. It is a specific tool of measurement for the collection of data implying a response from the person being measured.\textsuperscript{29}

\textsuperscript{27} http://tabletennis.about.com/od/glossary/g/counterhit.htm

\textsuperscript{28} http://tabletennis.about.com/od/glossary/g/drive.htm

Norms

The word norm coming from the Latin word Norma, which means "angle measure" or (law like) "rule."  

A statistical description of the test performance of a well-defined group that serves as a reference by which to gauge the performance of the other individuals who take the test. Most norms tables show, in descending order, various test scores and the percentage of people in the reference group who scored below each score level. Thus, knowing an individual's score, you can quickly determine how he or she compares with the reference group.  

"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." 

30 www.answers.com/topic/norm

31 www.collegeboard.com/about/news_info/sat/glossary.html

Barrow and McGee stated norms as a scale that permits conversion from a raw score to a score capable of comparison and interpretations.\textsuperscript{33}

Norms is a standard to which an obtained score may be compared.\textsuperscript{34}

The definition of Norms given by Donald K. Mathews is applicable for the purpose of this study.

\textbf{Significance of the Study}

There are various factors contributing for the top performance in today's competitive sports such as skills, techniques, tactics, physical, physiological, psychological characteristics etc. The effectiveness of different training programmes and progress of a sports person is measured by administering same test from time to time. The skill test is used to assess and evaluate the performance of sports persons. Through this study the research scholar will make an attempt to construct norms

\textsuperscript{33} Harold M. Barrow and Rosemary McGee, "A Practical Approach to Measurement in Physical Education", p.45.

for Table Tennis Players at junior and senior level. This is a very first attempt of its own kind in Table Tennis scenario in India.

No two individual 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 teacher knows the deficiencies of individuals. With the availability of norms, the coaches and physical education teacher in school / colleges / universities can determine the playing ability and game status of the individual players and know the exact need of each individual. Thus, norms serve the purpose of a barometer to indicate the state of affairs with respect to the playing ability of a player. The present study will be of immense significance in the following ways: -

1. This study may be useful for the Physical Education Teacher and Coaches of Table Tennis to evaluate the performance of their students/trainees and to improve the Instructional Programmes and Teaching Procedure accordingly.

2. It may provide an appropriate norms table in Table Tennis for grading the students and trainees.
3. The achievement levels of the students/trainees may be ascertained in terms of skill test scores, which may help in selection of the teams.

4. The players may also evaluate their own performance in the specific skills of the game, and it may also provide incentives for improvement.

5. The study will inform the International Table Tennis Federation (I.T.T.F.), Table Tennis Federation of India (T.T.F.I.) about the Norms on Specific Skill Test for Table Tennis Players and if found appropriate, use can be made.

6. The norms may provide a reliable and useful basis for interpretations and evaluation of programme.