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Effect of approved and non-approved racket on fore hand chop to chop skill acquisition amongst the novice table tennis players

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Abstract
The purpose of the study to find out the difference of skill acquisition for fore hand chops with the help of approved racket & non-approved racket.
As per the rule book of International table tennis federation, they have specified the specific rules for table tennis racket, so according the ITTF rules the racket set in that rules are called as approved racket & the racket which are not following the rules of ITTF is non approved racket.
So the purpose of the study is to find out the difference of skill acquisition with approved & non-approved racket for the fore hand chop skill. For this test set by training manual of Netaji Subhash National Institute of Sports is taken for 60 students of non-approved racket & 60 students with approved racket.

Keywords: physical education, table tennis players, acquisition

Introduction
Table tennis has a long history from 1900 to till the date. Many changes took place for the equipment and role of equipment in table tennis history.
In early days of table tennis racket was not as sophisticated as it is today known as hard bat, table tennis was simple game played with simple racket.
Hard bat focuses on skill, playing with hard bat rallies was longer playing with hard bat game was more aerobic. Not faster more tiring.
Till 1952 there was no really standardized bat, but in 1952 Japanese player Satoh has introduced a sponge bat. In this bat thin layer of sponge gave the bat more bounce & more speed so game became farcical. In the end, Table tennis association was compelled to ban. Racket became standardized and we had the development of the sandwich bat. A plywood blade with thin layer of sponge covered by dimpled rubber on either side.

Sandpaper Bat (1900-1920)
Table Tennis was invented during the late 19th century in Britain. By the early 20th century, sandpaper table tennis bat were introduced and being used worldwide. It wasn't until the 1920's that hard bat were first seen and sponge bats didn't appear until the 1950's. However once rubber hard bat (& then sponge bats) were introduced the sandpaper version of the game began to die out as player upgraded to the newer and faster equipment.

Hard Bat era (1920-1950)
In the early days of table tennis racket wasn't as sophisticated as it is today.
Known as Hard Bat, Table tennis was simple game played with this simple racket.
The Hard bat comprise of a wooden blade with ordinary pimpled rubber attached with the
Pimples facing outward. While playing with hard bat player feels the contract of the ball with racket, the energy transmitted directly to the hand. When a player cracks a solid slam, it is through the force of the players swing and nothing else. The power is unaided by any catapulting effect; all action by the player produces an equal/opposite reaction on the ball and a commensurate " whack" sound from the wood. The game is thus more immediately coherent and logical, and even a child can understand what is happening to the ball as a result of the actions of the players.
So while playing with hard bat rallies was longer playing with a hard bat game was more aerobic. Not faster not more tiring.

Sponge Bat Era (1950-1980)
In the season 1951-52 all this was changed when the Japanese turned up - or more particularly when Satoh turned up. At this time there was no really standardized table tennis bat; a player could use anything he fancied. The same is still true in that many first-class players continue to experiment with new technologies. But with the arrival of Satoh it became clear that there had to be limits as to what kind of bat was used for Satoh's was one of the most extraordinary ever seen in the game. It was an enormous sponge bat - it looked like an ordinary bath sponge, consisting of a middle of wood with outer facings of pure sponge, two inches thick, on each side.
It almost destroyed table tennis.

- **What is a racket?**

A Table tennis racket is made up to two distinct pairs – a wooden blade which incorporates the handle together with

table tennis rubber affixed to each side of the blade using water based glue.

Approved Racket

The Racket is the individual equipment of each player who chooses a racket he will train and compete with within the set rules, Rules regarding rackets and material approved for playing are wide and leave great choice for different possibilities.

As per the international Table Tennis federation rules are set for the racket in the rule book of table tennis.

Racket Rubber

In table tennis there are five basic kinds of rubber, each of which has specific basic

Characteristics that determine the main purpose of each of these kinds of rubber. The main kinds of rubber are:

1. Pimple Rubber
2. Backside (Reverse Rubber)
3. Pimples Out
4. Anti-Spin
5. Long Pimples

Need and Importance of the problem

The table tennis has its origin in England as after dinner amusement for upper class Victorians in the 1880'. Mimicking the game of tennis in an indoor environment, everyday objects were originally enlisted to act the equipment. A line of books would be the net, a rounded top of a champagne cork or knot of string as the ball, and a cigar box lid as the paddle (Racket).

The next major innovation was by Jamed Gibb, an English enthusiast of the game, who discovered novelty celluloid ball and trip to the U.S. in 1901 and found them to be the ideal ball for the game. This was followed by E.C. Goode who in 1903 invented the modern version of the racket by fixing a sheet of pimpled or stipple, rubber to the wooden blade.

In 1950 rackets that used a rubber sheet combined with underpaying sponge layer changed the game dramatically, introducing greater spin and speed. The use of the speed glob increased the spin and speed even further, resulting in changes to the equipment to slow the game down.

Towards the end of 2000 the ITIF instituted several rule changes aimed at making table tennis more viable as a televised spectator sports. First the older 38 mm balls were officially replaced by 40 mm ball. This increased the balls resistance and effectively slowed down the game. By the time players had begun increasing the thickness of the fast spangle layers on their bats.

Which made the game excessively fast and difficult to watch on television? Secondly the ITIF changed from a 21 and 11 point scoring system. This was intended to make game more fast paced and exciting.

So all these changes increased the importance of racket.

Whichever player has a good racket will have a slighter advantage on his opponent and table tennis becomes an equipment orientated game. The player who has good quality approved equipment definably he or she will have a greater performed skills compared with non-approved equipment or racket.

Approved racket provides even surface and, even bounce for the ball so, while learning skills for table tennis it is important to develop a sense of bounce of the ball from racket and if it is not even then it will not develop the sense of bounce. A non-approved racket may not have the even surface or bounce so it will not provide an even bounce so it may not develop the racket sense for the beginner players. Hence the present study is undertaken by the researcher to study up to what extend approved and non-approved rackets affects the skill acquisition among the table tennis players.

Significance of the study

1. The study may also be useful for beginner players to decide when to start using good (approved) equipment.
2. Approved equipment can help players to learn skills earlier faster.
3. Result of the study will help players to decide their equipment.
4. Result of the study will improve players playing style.

Scope of the research

1. Table Tennis players from Jalna district and Aurangabad district are considered for study.
2. Specific skill test for Age Group of 8 to 13 years as per the training manual Table Tennis by sports Authority of India. Netaji Subhash National Institute of sports Patiala.
3. Fore hand chop to chop table tennis skill is selected for evaluation.

Statement of the problem

Effect of Approved and Non-approved racket on fore hand chop to chop acquisition amongst the novice table tennis players.

Objective of the study

1. To study the effect of approved and non-approved rackets on Fore hand chop to chop skill acquisition among the players at the age between 8-13 years.

Hypotheses

1. There will be no difference in fore hand chop to chop skill acquisition amongst the players of the age between 8 to 13 years who are using approved and non-approved rackets respectively.

Methods

Sample

The samples for this study will be selected from two different district namely Jalna district and Aurangabad district. 60 subjects from Jalna district and 60 subjects from Aurangabad district of the age between 8 to 13 years will be selected. Total 120 subjects will participate in the study.

Further these 120 subjects on both districts will classify in two groups i.e. group of 60 subjects with Approved racket and group of 60 subjects with Non-approved racket.

Variables

Independent variable

1. Approved and Non Approved Table Tennis Racket

Dependant Variables

1. Fore hand chop to chop (Cross court)

Tools and Means of collecting data

1. Personal data Bank
2. Table tennis table
3. Video camera
4. Specific skill test for age group 8 to 13 years scoring system as per training manual of table tennis by sport authority of India Netaji Subhash National Institute of Sports Patiala.

Experimental Design of the Research

For the present experimental study informal experimental design will be considered.

Experimental Design

After with control design.

- For the research study two groups will be form and the dependent variables will measured in both the groups for an identical time period at posttest only.
- The specific skill test for the age group of 8 to 13 years will be introduced to experimental groups. Dependent variable will be measured in both the groups after regular interval for 6 months.
- The effect of training will be determined by evaluating the changes in the performance of both the groups at posttest.

This can be exhibited in the following form.

Table 1

Area		Time period (II)
Approved group	Exposure with the approved racket.	Level of skill acquisition after 6 months (Y)
Non approved group	Exposure with non approved racket	Level of skill acquisition after 6 months (Z)

Procedure (Conduct of the test)

1. Researcher will select 60 samples from two districts namely Jalna and Aurangabad.
2. Further these 60 samples of each training center will be classified in two group's i.e. Approved Racket and Non-approved Racket with 30 samples in each group.
3. Nine specific table tennis skill tests will be selected for the skill training program. All the nine skill tests are recognized by sports authority of India, Netaji Subhash National Institute of Sport, Patiala.
4. The subject of the approved racket and the non-approved racket group will be given basic table tennis training.

Collection of data

1. Specific table tennis skill test measuring scale standardized by sports authority of India, Netaji Subhash National Institute of Sports, Patiala.
2. Skill test will be conducted to evaluate the performance of the sample of approved and non-approved racket group.
3. To judge the performance 3 qualified expert judges will be appointed.
4. During the skill test subjects of both the groups i.e. approved and non-approved racket group will be directed to perform the learn skill for one time.
5. As the nine specific table tennis skill test are recognized by Netaji Subhash National Institute of Sports, Patiala. The evaluation of table tennis skill test will be carried out according to the rules and regulation.
6. Every skill will be given maximum five points for every performance.
7. The collected data of every test will be tabulated for further statistical analysis.

Statistical Methods

To analyze the collected data statistical methods will be adopted for comparing, analyzing and interpretation of numerical values and based on which the findings will be discussed.

Table 2

Variables	Groups	N	Mean	Standard deviation	Standard. error mean	Mean difference	't' value	Df
Fore hand chop to chop	Approved	60	3.5833	1.88024	.24274	1.38333	4.006*	118
	non-approved	60	2.2000	1.90272	.24564			

Showing the comparison of the mean scores obtained with approved and non-approved rackets for fore hand chop to chop skill acquisition test.

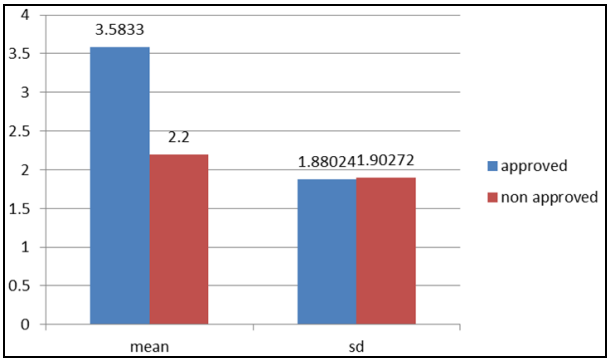

Fig 1

Interpretation

Table 4.1 depicts the following facts regarding the score obtained with approved and non-approved rackets for forehand chop to chop service target skill acquisition test.

1. Mean score obtained with approved racket for fore hand chop to chop skill test is 3.5833 with standard deviation of 1.88024.
2. Mean score obtained with non-approved racket for fore hand chop to chop skill test is 2.2 with standard deviation of 1.90272
3. The mean difference among the scores obtained with approved and non- approved rackets for the fore hand chop to chop skill test is 1.0666.
4. T-test was used at 0.05 level of significance. The obtained t- value 4.006 at 118 degree of freedom was found insignificant at 0.05 level of significance further confirms that the mean difference among the scores obtained with

approved and non-approved rackets for forehand chop to chop service target skill acquisition is significant.

Testing hypothesis 4

The hypothesis state that there will be no difference in fore hand chop to chop skill acquisition among the player between 8 to 13 years who are using approved and non- approved racket respectively. It is evident from t-score that approved and non-approved racket for fore hand chop to chop skill is significant. Hence the hypothesis is rejected on the basis of statistical findings.

Conclusion

As the mean difference was found significant on the basis of statistical findings.

The result of the study states that there is significant difference in fore hand chop to chop skill acquisition among the players of the age between 8 to 13 years who are using approved and non-approved rackets respectively.

Fore hand chop to chop skill acquisition is better achieved with the approved rackets.

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