



Table Tennis Forehand Topspin Shot Ability Level of FIK UNM Students

Akbar Sudirman
Universitas Negeri Makassar

Corresponding Author: Akbar Sudirman akbar.sudirman@unm.ac.id

ARTICLE INFO

Keywords: Topspin, Table Tennis, Students

Received : 04, October

Revised : 06, November

Accepted: 08 December

©2024 Sudirman: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

This study aims to determine the level of forehand topspin stroke ability in table tennis among FIK UNM students. The location of this research was carried out on the FIKK UNM campus, precisely at the Tenismeja GOR. This research is a type of quantitative descriptive research using survey methods. The sample in this research is students majoring in PJKR FIK UNM who program table tennis courses, totaling 40 people. The test instrument used was a forehand topspin shot test with a middle and baseline target of 10 balls each. Based on the research results, 3 people (7.5%) stated that the table tennis forehand topspin table tennis ability level scores of PJKR FIK UNM students were very poor, 9 people (22.5%) were declared inadequate, 13 people (32.5%) were declared sufficient, 11 people (27.5%) said it was good, and 4 people (10%) said it was very good.

INTRODUCTION

Table Tennis is a mandatory subject presented in the curriculum of the Department of Physical Education, Health and Recreation, Faculty of Sports and Health Sciences, Makassar State University. Because of its mandatory nature, there needs to be innovation in presenting this course so that every student can achieve completeness in programming this course. Achieving completeness, which is one of the assessment indicators, is each student's ability to master the basic techniques in the sport of table tennis. Some of the basic techniques available from the most basic to the advanced level include grip, body position, strokes (serve, push, drive, spin, chop, block, flick), and foot position. All these basic techniques are presented in lecture practice by applying efficient and effective learning methods. In an effort to make it easier for every student to master these basic techniques, they can choose a method that is creative, educational, and fun, namely the Drill Method. The Drill method is packaged by learning while playing in learning to carry out movements in the form of play which leads to training in strength, flexibility, and dexterity.

Of the several basic techniques that exist in the game of table tennis, the Forehand Topspin shot is one technique that has higher complexity than other techniques and it can be said that the Forehand Topspin is an advanced technique in the game of table tennis, therefore the right method is needed to be skilled in doing it. Based on this rationale, researchers are interested in finding out the level of forehand topspin hitting ability of PJKR FIK UNM students in table tennis after following the table tennis lecture material. The results of this research will provide a clear picture regarding the extent and extent of the forehand topspin hitting ability of PJKR FIK UNM students in table tennis..

LITERATURE REVIEW

A student is a status held by a person because of his or her relationship with a tertiary institution and is expected to become an intellectual candidate or it could also be defined as a person who is studying or studying at a tertiary institution, be it at a university, institute or academy. Students can be defined as individuals who are studying at the tertiary level, either public or private, or other institutions at the same level as tertiary institutions. Students are assessed as having a high level of intellect, and intelligence in thinking and planning in action. Thinking critically and acting quickly and precisely are traits that tend to be inherent in every student, which are complementary principles.

Sports students are complex individuals because, in their daily practice, they involve all elements of human life as a whole, namely soul, mind, feelings, and physicality through theoretical and practical lecture activities. Especially in the table tennis course, these elements will of course be fully involved through practical training in lectures. The meaning of training has been defined by various coaching experts, including; according to (Harsono, 2018) Training is a systematic process of practicing or working, which is done repeatedly, increasing the amount of training and workload day by day. Meanwhile, according to Hare in (Wiaro, 2013) Exercise, which comes from the word training, is a process of perfecting capacity in sports using a scientific approach, using planned and regular educational principles, so as to increase the readiness and capacity of

athletes. According to (Wiarto, 2013), Training is one part that can form adaptations to a person's body's physiological system. It is not uncommon for an athlete's personality to be greatly influenced by the environmental conditions created during training. Definition of exercise according to (Bompa, 2009) ; "Training is usually defined as a systematic process of long duration, repetitive, progressive exercise, having the ultimate goal of improving athletic performance. Training is intended as a systematic process carried out over a long period of time, repeatedly, and progressively, and has the aim of improving the athlete's performance. Then obey (Budiwanto, 2017) Training is a complex and methodological work process in the training process using efficient and effective methods which are structured as a training methodology within a predetermined time period.

To know table tennis, of course, you also have to know the types of shots. One of them I want to tell you a little about according to the focus of the research is forehand topspin (spinning ball). Topspin is often thought of as a lob ball movement or high bounce from a table tennis player, the position is when the bat precisely sweeps behind the ball and the ball spins away from the bat by rotating on its axis towards the front (Salim, 2022). Forehand Topspin is similar to a regular drive movement, but the forehand topspin shot is not only assisted by more backswing but also uses the wrist, so the resulting spin on the ball is more than a regular drive. In executing a topspin forehand shot there are two most basic forces; one is the force of a blow hitting the ball which is better known as hitting, and the other is the friction force which is better known as swiping the ball. Apart from balls that are high near the net, which can be hit quickly, hitting other balls must be equipped with friction. What you need to know is why he uses a topspin forehand ball. According to Dedydods (2007) in (Sudirman, 2012) Explains that in the process of the spin below:

- Hitting can increase the speed and power of the ball, swiping can cause the ball to spin up (topspin). The topspin is useful for creating a curved line that fits the stroke.
- When creating spin, you should first hit, then swipe with a hitting motion until the ball comes close to sticking to the surface of the bat, then increase the friction force.

How to execute a topspin forehand shot is as follows:

- The starting position of the body forms a square position with the table, in other words, a ready position, where the legs are slightly wider apart than the distance between the two shoulders. The position of the right arm forms a 160° angle at the elbow.
- The bet position is closed at a 45° angle, and when ready to hit the bet position is under the ball.
- The ball is hit while swiping from bottom to top in front, when ready to hit the right foot slightly supports the body weight, after the bet is swung upwards the body weight shifts to the left foot, and the elbow angle changes to 90°. The ball is hit when it reaches its highest point.

What is certain is that it helps control the ball so that the possibility of making mistakes is reduced. This is necessary as one of the tactics and strategies of modern table tennis. Apart from that, the type of court surface can make the topspin forehand more effective. You also need to know the effect of forehand topspin, namely that it can change the rotation of the ball in the air and also the trajectory of the ball's speed and change the ball's bounce. In a series of topspin forehand strokes, the ball starts from the bottom and ends above the contact point, so the racket is required to swing from the bottom up.

According to (Hodges, 2000) Topspin characteristics are:

- The ball moves downwards, this means that a ball that is hit hard will usually go towards the end of the table and can still touch the table. This makes topspin very suitable for attacking players because you can control the attack by forcing the ball to move down.
- The ball bounces after touching the table, out of the opponent's reach making it difficult to return. This makes the opponent fail to return because they cannot reach the ball.
- Returning the ball high or leaving the table if the opponent does not calculate topspin first.

The advantage of forehand topspin is control, helping to lower the ball so the player can hit the ball higher above the net with less risk of the ball going out of line. This reduces the chances of players making mistakes. Then tempo is important for players who have a hard shot because the ball will travel at high speed with a greater chance of leaving the playing area of the field. This forehand topspin helps keep the ball in the playing area of the court by forcing the ball down. A high bounce makes the ball dive down onto the surface of the field from a steeper angle and will produce a higher bounce. Likewise, the advantage of a fast bounce is that a topspin forehand ball can go faster. Likewise, the timing of a topspin forehand shot for players who are advancing toward the net or playing at the net is very difficult to get the timing right because the ball will fall quickly. Another advantage is that it is easier to force your opponent to keep playing at the back of the court with a topspin forehand because this shot makes the ball bounce high and often takes the ball toward the back of the court.

Based on the description above, it can be concluded that the topspin forehand stroke is a type of forehand stroke that is a development of the drive or smash stroke which leads to the characteristics of the stroke itself accompanied by upward friction of the ball. To be able to be proficient in performing these punching techniques, you need the right training method and do it regularly.

METHODOLOGY

This research is descriptive research with a survey method. According to (Sugiyono, 2013) the descriptive method is a method used to describe or analyze research results but is not used to make broader conclusions. The location of this research was carried out on the FIK UNM campus, precisely at the Tenismeja GOR, involving 40 students as samples. The variable in this research is a single variable, namely "Forehand Topspin Shot Ability in Table Tennis Games among PJKR FIK UNM Students". The ability to hit a forehand topspin in table tennis as referred to in this research is a person's ability to hit a forehand topspin 20 times,

which is divided into the first 10 hits at the mid-court target and the next 10 hits at the baseline target. Every ball that enters the target and is accompanied by a spin is counted as 1 point and if the ball falls outside the target it is counted as zero (0), even if the ball falls in the target area but is not accompanied by a spin then it is still counted as zero (0) so that each participant /sample can only get 20 points maximum.

Data analysis techniques are adapted to research questions and hypotheses. The questions and hypotheses proposed in this research are in accordance with descriptive analysis. Data from observations and assessments of the implementation of the forehand topspin hitting ability test for PJKR FIK UNM students as a whole will be categorized based on the following norms..

Table 1. Category Norms, (Sudirman, 2022)

No	Interval	Kategori
1	$M + 1,5 SD > X$	Sangat Baik
2	$M + 0,5 SD < X < M + 1,5 SD$	Baik
3	$M - 0,5 SD < X < M + 0,5 SD$	Sedang
4	$M - 1,5 SD < X < M - 0,5 SD$	Kurang
5	$X < M - 1,5 SD$	Sangat Kurang

Information:

M : mean

SD : standar deviasi

RESEARCH RESULT

The results of descriptive data analysis of the level of forehand topspin hitting ability of PJKR FIK UNM students can be seen in the following table.

Table 2. Summary of Descriptive Data on Forehand Topspin Ability Level of PJKR FIK UNM Students

No	Name	Score (Poin)	No	Name	Score (Poin)
1	Testee 1	3	21	Testee 21	11
2	Testee 2	4	22	Testee 22	12
3	Testee 3	8	23	Testee 23	6
4	Testee 4	8	24	Testee 24	6
5	Testee 5	8	25	Testee 25	6
6	Testee 6	10	26	Testee 26	6
7	Testee 7	10	27	Testee 27	7
8	Testee 8	11	28	Testee 28	7

9	Testee 9	11
10	Testee 10	11
11	Testee 11	12
12	Testee 12	13
13	Testee 13	5
14	Testee 14	5
15	Testee 15	6
16	Testee 16	10
17	Testee 17	10
18	Testee 18	10
19	Testee 19	13
20	Testee 20	14
29	Testee 29	7
30	Testee 30	15
31	Testee 31	4
32	Testee 32	5
33	Testee 33	9
34	Testee 34	9
35	Testee 35	7
36	Testee 36	7
37	Testee 37	6
38	Testee 38	8
39	Testee 39	9
40	Testee 40	9

This research is quantitative descriptive research with one variable without making comparisons with other variables. The research data can be seen through the following descriptive statistical table.

Table 3. Descriptive Statistics

Descriptive Statistics						
	N	Min	Max	Sum	Mean	SD
Forehand Topspin	40	3	15	338	8.45	2.917
Valid N (listwise)	40					

Description:

N : Number of students

Min : Minimum Value

Max : Maximum Value

M : Mean

SD : Standard Deviation

The results obtained are the maximum value (highest points) of 15 points and the minimum value (lowest points) of 3 points. The mean value is 8.45 and the standard deviation is 2.917. Next, the data is categorized into 5 categories, namely Very Good, Good, Fair, Poor and Very Poor. The calculation of norms for the topspin forehand hitting ability category of PJKR FIK UNM students can be seen in the following table.

Table 4. List of Normative Calculations for Topspin Forehand Ability Test Results for PJKR FIK UNM Students

Formulas	Limitation	Category
$M - 1,5 SD \geq X$	$4,07 \leq X$	Not much
$M - 1,5 SD < X \leq M - 0,5 SD$	$4,07 < X \leq 6,99$	Not enough
$M - 0,5 SD < X \leq M + 0,5 SD$	$6,99 < X \leq 9,91$	Enough
$M + 0,5 SD < X \leq M + 1,5 SD$	$9,91 < X \leq 12,83$	Good
$M + 1,5 SD < X$	$12,83 > X$	Very good

Description:

X = Score

M = Mean

SD = Standard Deviation

Through the normative table above, it can be seen the frequency distribution of the Topspin Forehand Shot Ability category of PJKR FIK UNM Students.

Table 5. Frequency Distribution of Forehand Topspin Ability Levels for PJKRFIK UNM Students

Interval	Category	Frequency	Persentase (%)
$X \leq 4$	Not much	3	7,5%
5 - 6	Not enough	9	22,5%
7 - 9	Enough	13	32,5%
10 - 12	Good	11	27,5%
$X > 12$	Very good	4	10%
Total		40	100%

Based on the table above, the level of Topspin Forehand Shot Ability of PJKR FIK UNM Students, 3 people (7.5%) was declared very poor, 9 people (22.5%) were declared inadequate, 13 people (32.5%) were declared sufficient, 11 people (27.5%) said it was good, and 4 people (10%) said it was very good. So based on the highest percentage it is in the sufficient category with a value of 32.5%. So the level of Topspin Forehand Shot Ability of PJKR FIK UNM Students is considered sufficient.

PJKR FIK UNM Students' Topspin Forehand Ability in the Fair category is a reasonable and satisfactory predicate because these students are samples from various sports backgrounds, such as basketball, volleyball, sepak takraw, table tennis, field tennis, and many more come from other sports. PJKR FIK UNM Students' Topspin Forehand Ability can be observed through the following graph.

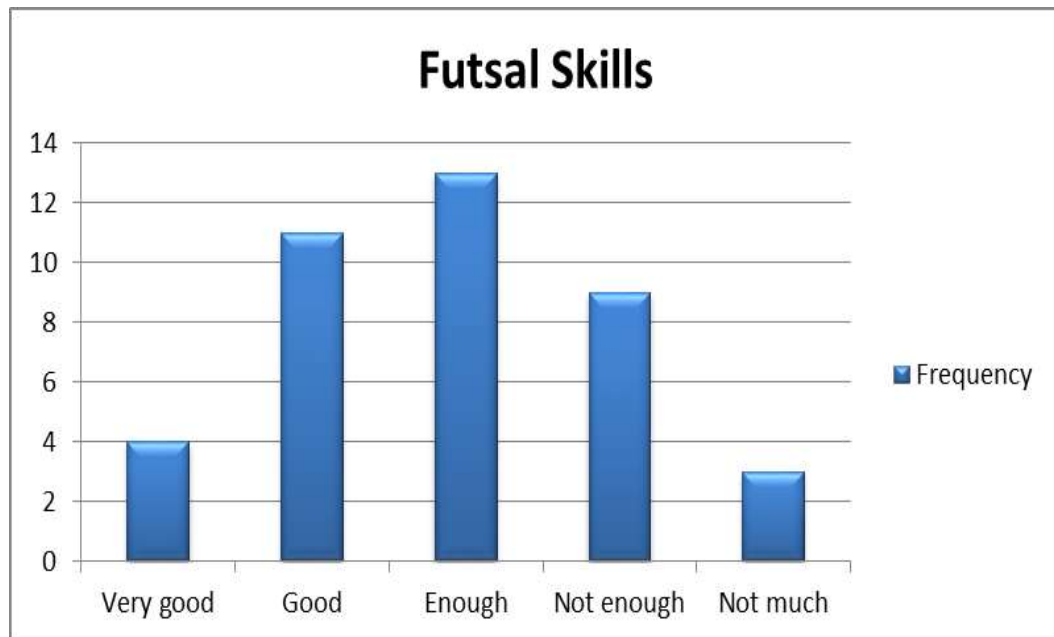


Figure 1. Graph of Hitting Ability levelForehand Topspin of PJKR FIK UNM Students

DISCUSSION

Forehand topspin in table tennis is one of the most important and effective techniques for improving offensive play. This technique is used to give the ball a spin effect, which makes it more difficult for the opponent to return. The following are the main points to pay attention to when performing a topspin forehand: (1) The racket grip should be comfortable and allow good control, shakehand, and penhold grips are two common styles. (2) Body Position, standing in an athletic position with knees slightly bent, body weight on the tips of the feet, and body slightly sideways towards the table. (3) Swing movement, the swing starts from the bottom to the top, with the racket tilted to create topspin. This movement involves rotating the hips and shoulders to increase power. (4) Ball contact, the ball must be touched at the bottom or slightly behind it to produce topspin. Contact must be made when the ball is at its highest point (peak bounce).

The benefit of forehand topspin is that the ball with topspin has speed and rotation which makes it difficult for the opponent to return it under control so that the attack is effective. This technique can be used in various situations, both in close to the table and far from the table (mid-distance). Topspin allows a player to keep control of the ball even if the opponent tries to attack. The challenge in forehand is that beginner topspin players often focus too much on strength so they lose control and consistency, wrong body position or coordination can reduce the accuracy and effectiveness of the shot. When the opponent gives the ball with a different spin, the player must be able to adjust the racket angle and timing.

Based on the results of the research that has been carried out, with a description of the data obtained in the field, the results are then analyzed according to the needs that have been formulated in this article. Then the average value of the forehand topspin table tennis ability of PJKR FIK UNM students is 8.45. These values are in the interval $6,99 < X \leq 9,91$ and a frequency of 13 with a percentage of 32.5%, the level of forehand topspin table tennis ability of PJKR FIK UNM students is declared "sufficient".

CONCLUSIONS AND RECOMMENDATIONS

The level of forehand topspin table tennis ability of PJKR FIK UNM students was declared "sufficient". This research also reflects the researcher's experience, so that future researchers who will study the same topic, namely the ability of table tennis forehand topspin shots, should use standard ping pong balls with bets using standard rubber so that participants can really deliver topspin shots Maximum

ADVANCED RESEARCH

Suggestions for future researchers are to study previous research on forehand topspin, both from the aspects of biomechanics, technique, and factors that influence performance. This can help in designing more comprehensive survey instruments. It's best to pay attention to diversity in demographics, such as age, gender, and gaming experience so that research results are more general. Additionally consider using technology such as a slow-motion camera or motion analysis device to get more accurate data on the forehand topspin technique.

ACKNOWLEDGMENT

In this section, I would like to express my thanks to all parties involved in this research, especially the PJKR FIK UNM students who were the research objects as samples, as well as colleagues who have participated and contributed ideas to this publication.

REFERENCES

- Bompa, T. O. (2009). *Periodization Theory and Methodology of Training* (P. Michael S. Bahrke (ed.)). Human Kinetics.
- Budiwanto, S. (2017). *metodologi latihan olahraga*.
- Harsono. (2018). *Kepelatihan Olahraga Teori dan Metodologi* (A. Kamsyah (ed.)). PT. Remaja Rosdakarya Offset.
- Hodges, L. (2000). *TENIS MEJA Steps to success Tingkat Pemula*.
- Salim, A. (2022). *Buku Pintar Tenis Meja*. <https://nuansa.co/product/buku-pintar-tenis-meja/>
- Sudirman, A. (2012). *Sudirman: Kontribusi Kekuatan Otot Lengan, Kelentukan*

- Sudirman, A. (2022). Level of Basic Skills for Playing Futsal of Students in the Faculty of Sports Science, Makassar State University. *East Asian Journal of Multidisciplinary Research*, 1(4), 595-602.
<https://doi.org/10.55927/EAJMR.V1I4.359>
- Sugiyono, D. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*.
- Wiarso, G. (2013). *Fisiologi dan Olah Raga*. Graha Ilmu.