



Contribution Of Arm Muscle Training To Smashing Ability In Badminton At Negeri 17 Bengkulu Utara Junior High School

Pebrian Gultom ¹, Dwingki Marta Putra ², Ajis Sumantri ³

^{1,2,3} Universitas Dehasen Bengkulu
e-mail: Pebrianqultom2003@gmail.com

Received [16-12-2025]

Revised [24-02-2026]

Accepted [07-03-2026]

Abstract. This study aims to see the contribution of arm muscle training to the smash ability of badminton sports at SMP Negeri 17 Bengkulu Utara. This type of research is correlation research. The sample of the study was 20 people. The instruments used in this study were hand pull up tests and Badminton Smash Skills. Based on the results of the study above, there is a contribution of arm muscle training to the smash ability in badminton sports at SMP Negeri 17 Bengkulu Utara, that arm muscle strength to the smash ability in badminton sports at SMP Negeri 17 Bengkulu Utara is 94.77% which means that arm muscle strength contributes to the smash ability in badminton sports at SMP Negeri 17 Bengkulu Utara.

Keywords: *Pull Up, Smash Skills, Badminton.*

INTRODUCTION

Given the immense popularity of badminton in Indonesia, especially with the numerous Indonesian players who have won numerous world *championships*, the sport's development has accelerated, with numerous badminton championships taking place, ranging from village/sub-district and club levels to national and even international championships. Badminton championships are generally organized by various organizations. Badminton championships are also frequently held at the school level, from elementary school to junior high school and high school, all the way up to the National Sports Week (O2SN).

To become a successful badminton player, one must master technical and other supporting factors. Mastering basic badminton techniques and strokes is the foundation for a successful playing style. This, of course, must be supported by the guidance of a qualified coach. This care should be taken from the outset, for example, by establishing badminton clubs in the region. These clubs will foster the development of talented badminton players.

If someone wants to achieve optimal performance, they need to have four things which include (1) physical training, (2) technical training, (3) tactical training, (4) mental training and (5) competitive readiness. The factors that determine sports achievement are (1) biological aspects which consist of the body's basic potential or abilities, body organ function, body structure and posture, nutrition, (2) psychological aspects which consist of intellectual, motivation, personality, muscle and nerve coordination, (3) environmental aspects, (4) supporting aspects.

A smash is a chance for a player to score by returning the ball to the opponent's court. Before deciding to *smash*, a *player* must first consider the situation and their position. This is because this shot is identified as an attacking shot aimed down into the opponent's playing area, delivered with full power, requiring muscle strength in the legs, shoulders, arms, wrist *flexibility*, and harmonious body coordination.

At SMP Negeri 17 Bengkulu Utara, especially the VIII grade students in the badminton sport branch, their sporting achievements are less than optimal. At the O2SN School level, Badminton Players at SMP Negeri 17 Bengkulu Utara were eliminated in the preliminary round. This was due to the lack of preparation and handling of players in the badminton sport branch.

This sport is a very interesting sport and is not something foreign to them. This is based on observations for several days given the mandate from the head of the department to teach students who still do not understand the basic techniques in the game of dropshot, drive and smash except only a few badminton itself, especially the basic technique of doing a *lob*, only people who are almost and able to do the smash technique. By seeing the problems encountered, the author is interested in developing students' abilities in doing one of the basic techniques in badminton, more specifically in *smash strokes* that are less mastered by grade VIII students. Seeing the lack of badminton game skills by grade VIII students, especially how to do a smash stroke, it is necessary to do maximum arm muscle strength training to get satisfactory results in stroke ability.

LITERATURE REVIEW

Badminton is one of the world's most popular sports. It attracts players of all ages and abilities, and both men and women play it both on and off the court for recreation and competition.

This game requires agile and fast movements to defeat opponents. Badminton is a sport played using a net, racket, and *shuttlecock*, also known as a ball. The strokes vary from relatively slow to very fast, with techniques often used to trick opponents. The sport originated in the Indian city of Poona in the 18th century, and was later brought to Europe, specifically to the city of Badminton in England at that time. Hae Schell, who was the chief secretary of the IBF (International Badminton Federation) at the time, provided the background for the game, which developed into the popular sport it is today.

Many badminton clubs have been established throughout Indonesia to support this sport. However, relying solely on clubs is insufficient, as badminton is a sport played individually (singles) or in pairs (doubles) using rackets and shuttlecocks. It requires a high level of agility, precision, flexibility, physical endurance, and skill. Therefore, it requires highly skilled and disciplined coaches, as well as talented players who are obedient to their coaches' commands.

METHODS

According to Ardansyah et al. (2017:2), correlational research is research that attempts to determine whether there is a relationship between two or more variables. The independent variable is the exercise muscle arm while the dependent variable is skills *smash* Badminton. The contribution of this variable is important because by knowing the level of the existing relationship, researchers will be able to develop it according to the research objectives.

RESULTS

Results Test *Pull up*

Can it was concluded that of the 20 people at SMP Negeri 17 Bengkulu Utara have ability muscle arm as many as 3 people (15%) have category not enough once. as many as 6 people (30%) have category not enough. as many as 7 people (35%) less own category currently And as many as 4 people (20%) have category Good.

Tabel 1 Results Test Skills Badminton Smash

No	Tes Smash Bulu Tangkis	Kategori	Frekuensi	Persentase (%)
1	81 – 100	Baik Sekali	0	0 %%
2	61 – 80	Baik	2	10 %
3	41 – 60	Sedang	9	45 %
4	21 – 40	Kurang	5	25 %
5	1 – 20	Kurang Sekali	4	20 %
Jumlah			20	100 %

Can it was concluded that out of 20 people in SMP Negeri 17 Bengkulu Utara have ability badminton *smash* as many as 4 people (20%) have category not enough once . as many as 5 people (25%) have category not enough . as many as 9 people (45%) less own category currently And as many as 2 people (10%) have category Good.

DISCUSSION

Badminton is an individual game played by one player against another or two players against two players. This game uses a racket as a hitting tool and a *shuttlecock* as a hitting object. The playing court is rectangular and is bordered by a net to separate the playing area of the player's own game from the opponent's game area.

Based on the results of the hypothesis test proposed in this study, it is "There is a Contribution arm muscle training for *smashing* ability in the sport badminton sports at SMP Negeri 17 Bengkulu Utara ". tested with a simple correlation, and significance test with a t-test, namely by comparing t_{hitung} with t_{tabel} . Ho tested in this case is the correlation coefficient of arm muscle strength to badminton *smash* skills is significant. The test criteria are: reject Ho: if the value is $t_{hitung} > t_{tabel}$, otherwise accept Ho if the value is $t_{hitung} < t_{tabel}$.

Strong contribution Contribution arm muscle training for *smashing* ability in the sport The percentage of badminton athletes at SMP Negeri 17 Bengkulu Utara was 94.77 %. This was confirmed by the discovery of a significant contribution from arm muscle training to *smashing ability* in the badminton sport . Badminton sports at SMP Negeri 17 Bengkulu Utara.

Of all the research tests conducted, such as arm muscle training on *smashing ability* in the sport badminton sports at SMP Negeri 17 Bengkulu Utara, it can be concluded that: Tests such as *pull up tests* towards ability *smash* hair parry obtained r_{table} of 0.443 because coefficient correlation between $r_{xy} = 0.97 > 0.443$ and contribution amounting to 94.77% . means Contribution arm muscle training for *smashing* ability in the sport badminton sports at SMP Negeri 17 Bengkulu Utara a is significant And big . With thus the hypothesis that states "There is a Contribution arm muscle training for *smashing* ability in the sport badminton sports at SMP Negeri 17 Bengkulu Utara " accepted.It can be concluded again that *pull ups* really contribute to the ability *smash* hair parry This can be proven by the test results which reached 94.77%, meaning have very important contribution strong.

CONCLUSION

Research results on " Contribution arm muscle training for *smashing* ability in the sport badminton sports at SMP Negeri 17 Bengkulu Utara ", then the following conclusions can be drawn: Based on the research results above, there is a contribution of arm muscle training to

smash ability in the sport of badminton sports at SMP Negeri 17 Bengkulu Utara, that arm muscle strength affects *smash ability* in the sport The badminton sport at SMP Negeri 17 Bengkulu Utara was 94.77%, which means that arm muscle strength contributes to *smash ability* in this sport. Badminton sports at SMP Negeri 17 Bengkulu Utara.

REFERENCES

- Achmad, Irfan Zinat (2016). *Hubungan Antara Power Tungkai, Koordinasi MataTangan, Dan Rasa Percaya Diri Dengan Hasil Keterampilan Open Spike Bola Voli*. Jurnal Pendidikan Unsika] Issn 2338-2996.
- Achmad Dkk (2017). *Analisis Keterampilan Teknik Bermain Pada Permainan Tunggal Dan Ganda Putra Dalam Cabang Olahraga Bulutangkis*. Jurnal Kesehatan Olahraga Vol. 05 No. 03 Tahun 2017, Hal 1-8.
- Adnan (2020). *Hubungan Kekuatan Otot Lengan dengan Kemampuan Servis Bawah Bola Voli di SMP Negeri 1 Setia Bakti*. Program Studi Pendidikan Jasmani Sekolah Tinggi Keguruan dan Ilmu Pendidikan Bina Bangsa Getsempena Banda Aceh. Hal. 1 – 8.
- Ahmad, Fandi (2020). Model Latihan Smash Bulutangkis Untuk Pemula Usia 8-10 Tahun. Jurnal Olympia.
- Ariski, Pondi Ahmad (2021). *Analisis Keterampilan Dasar Pukulan Bermain Bulu Tangkis Pada Pemain Pb Semurup Jambi*. Program Studi Pendidikan Olahraga Dan Kesehatan Jurusan Pendidikan Olahraga Dan Kepelatihan Fakultas Keguruan Dan Ilmu Pendidikan Universitas Jambi.
- Budiyanto, Setyo (2016). *Metodologi Penelitian Dalam Olahraga*. Kementerian Riset, Teknologi Dan Pendidikan Tinggi Universitas Negeri Malang Fakultas Ilmu Keolahragaan.
- Dendi (2023). *Hubungan Konsentrasi Terhadap Ketepatan Smash Bulutangkis Pada Klub Pb. Jambi Raya*. Program Studi Pendidikan Olahraga Dan Kesehatan Jurusan Pendidikan Olahraga Dan Kesehatan Fakultas Keguruan Dan Ilmu Pendidikan Universitas Jambi.
- Hafiz, Abdul (2014). *Upaya Meningkatkan Teknik Dasar Long Serve Dalam Permainan Bulu Tangkis Melalui Metode Blocked Practice Pada Siswa Kelas Viii Mts Al Ikhlas Jayaloka Kabupaten Musi Rawas*. Program Sarjana Kependidikan Bagi Guru Dalam Jabatan Fakultas Keguruan Dan Ilmu Pendidikan Universitas Bengkulu.
- Hastuti, Pudji (2009). *Buku Panduan Cabang Olahraga Bulu Tangkis Special Olympics, 2009*. Copyright C Pengurus Pusat Special Olympics Indonesia Isbn 978-979-16318-5-3.
- Faisal (2012). *Streng Treaning* (Latihan Kekuatan). Jurnal Cerdas Sifa, Edisi No.1.
- Imran, Ali (2019). *Peningkatan Ketrampilan Passing Bawah Bolavoli Dengan Menggunakan Metode Bermain Bola Pantul Peserta Ekstrakurikuler Bolavoli Di Sma Negeri 1 Praya Barat Daya*. Jurnal Pendidikan Mandala [Http://Ejournal.Mandalanursa.Org/Index.Php/Jupe/Index](http://Ejournal.Mandalanursa.Org/Index.Php/Jupe/Index). P-Issn: 2548-5555 E-Issn: 2656-6745.
- Indah, dkk (2023). Hubungan Kelentukan Dan Kelincahan Terhadap Kemampuan Smash Dalam Bermain Bulutangkis Di Gampong Meunasah Peukan Kecamatan Kota Sigli. Education Enthusiast: Jurnal Pendidikan dan Keguruan Volume 3. No. 4.
- Iskandar, Harris (2017). Raih Kemenangan. Kementerian Pendidikan Dan Kebudayaan Direktorat Pendidikan Anak Usia Dini Dan Pendidikan Masyarakat Direktorat Pembinaan Keaksaraan Dan Kesetaraan Tahun 2017.
- Kartika, Handayani (2017). *Analisis Faktor – Faktor Yang Mempengaruhi Kemampuan Pemecahan Masalah Soal Cerita Matematika*. Semnastikaunimed Isbn: 978-602-17980-9-6.