



Petanque Training Program Development for East Java Athletes in Preparation for the XXI Aceh-Sumut Pre-National Games (PRA PON)

Putri Faradilah ^{1*}, Nurhasan ², Muchamad Arif Al Arha ³,
Kolektus Oky Ristanto ⁴

^{1,2,3,4} Physical Education and Recreation Department,

State University of Surabaya, Surabaya, Indonesia

Korespondensi Penulis : putri.19149@mhs.unesa.ac.id

Abstract. This article and research aim to develop a training program focused on shooting and pointing techniques for East Java athletes in preparation for the upcoming Aceh-Sumut XXI Pre-National Sports Week (PRAPON). Shooting techniques are a fundamental skill in petanque, essential for scoring points and displacing the opponent's ball from the jack. Meanwhile, pointing involves throwing techniques aimed at positioning the ball close to the jack. This study involved East Java Puslatda athletes undergoing regular training sessions as preparation for PRAPON Aceh-Sumut XXI. The method used in this study is Research and Development (R&D). The findings demonstrate that the developed training program can enhance the quality of East Java athletes' shooting and pointing techniques, thereby aiming to achieve optimal results at PRAPON Aceh-Sumut XXI.

Keywords Petanque, Shooting and Pointing Training Program, PRAPON Aceh-Sumut XXI

1. INTRODUCTION

Sport is a physical activity intended to maintain and train the body, both physically and mentally. In Indonesia, sports have rapidly developed, especially those that are easy and affordable to perform, ranging from traditional to modern sports fields (Eko Cahyono & Nurkholis, 2018). Besides being a fun activity, sports indirectly contribute to a healthy body. People who engage in regular physical activities gain health benefits and overall physical fitness (Maulana & Bawono, 2021). Most sports branches in Indonesia have emerged from activities practiced by communities in certain regions, often as part of local culture or what is commonly known as traditional games (Mulya, 2020). Simple and easy-to-play tend to spread quickly, such as petanque. This sport was introduced to Indonesia in 2011. That same year the Indonesian Petanque Federation (FOPI) was established on March 18, 2011 (Yarmani & Defliyanto, 2020).

Indonesia has a variety of competitive sports, one of which is petanque. Petanque was first introduced in Indonesia at the XXVI SEA Games in 2011, held in Palembang, South Sumatra. This traditional game evolved from an ancient Greek game in the 6th century BCE, and in 1907, it was officially introduced in Le Ciotat, Provence Southern France, by Jules Boule Lenior (Saifulamri Alkhusaini et al., 2021). Petanque, which can be played individually or in teams, is accessible to all age groups, from children to adults,

and is suitable for both men and women. This sport is very simple and can be played anywhere on various surfaces, such as grass, soil, gravel, and others (Saifulamri Alkhusaini et al., 2021). It only involves two basic techniques: shooting and pointing (Purnomo & Yendrizal, 2020). Despite its simplicity, the sport has a wide range of competitive categories, including singles (men's and women's), doubles (men's, women's, and mixed), triples (men's, women's, and mixed), and shooting (men's and women's) (Sinaga & Ibrahim, 2020). Typically, not all categories are included in competitions, depending on the organizer, level, and type of event. Essentially, accuracy is the key to success in this sport (Souef, 2015).

The sport of petanque in East Java has experienced significant development over the past few years. Originally more popular in European countries, especially France, petanque has begun to gain widespread recognition in Indonesia and has become one of the sports of interest across various regions, including East Java. Petanque was first introduced to the people of East Java in 2015. Its spread began in major cities such as Surabaya, Lamongan, Malang, and Sidoarjo, where petanque communities began forming with the support of local governments and sports organizations. The presence of the Indonesian Petanque Sports Federation (FOPI) in East Java has also played an important role in facilitating the growth of this sport.

Over time, petanque has not only flourished in major cities but has also begun to spread to districts and other towns across East Java. Through various activities such as local tournaments, training sessions, and community outreach, petanque has become increasingly known and popular, especially among young people. In some areas, petanque has even become part of extracurricular activities in schools and is featured as a competitive sport in various regional competitions. Petanque athletes from East Java have achieved several notable accomplishments, including second place in the PON West Java exhibition, third place at the National Student Sports Week (POMNAS) in Makassar, and third place at championships held at the Bali and Semarang Open. Based on these achievements, Puslatda East Java athletes have attained numerous national-level accomplishments.

Local governments and FOPI (Indonesian Petanque Sports Federation) are actively organizing various introduction and training programs for Petanque. These efforts aim to nurture young players' interests and talents, as well as to strengthen the

petanque athlete base in East Java. Additionally, the improvement of sports facilities, such as petanque courts in several areas, supports the growth of this sport. Today, petanque has become a recognized sport in East Java. With the increasing number of clubs and athletes, as well as support from various parties, East Java has successfully produced accomplished petanque athletes who not only compete at the national level but also internationally. The growth of this sport in East Java indicates a significant potential for further development and promises a positive contribution to the region's future sports achievements.

Therefore, in 2023, the East Java petanque team was formed through selection and regional training (PUSLATDA). The team was established to represent East Java in petanque competitions in preparation for the Pre-National Sports Week (PraPON) in Aceh-Sumut. The training center was held for approximately one year before the competition took place. The athletes conducted centralized training at New Kampret Field in Menganti District, Gresik, East Java. During training, the coach provided special treatment in terms of nutrition and a well-structured training program. This was done for mutual benefit, especially to ensure the athletes perform optimally in the Pre-National Sports Week (PraPON) in Bali. The training program varied significantly, encompassing techniques, tactics, gameplay, sparring, and even organizing mini-events to test the athletes' skills. Based on this research, the problem, objective, and benefits that were found such as :

- (a). Does the training program for PUSLATDA JATIM athletes influence shooting and pointing performance in preparation for the Pre-National Sports Week (PraPON) XXI in Aceh-Sumut?
- (b). Is there improvement in the training program for PUSLATDA JATIM athletes in terms of shooting and pointing performance for the Pre-National Sports Week (PraPON) XXI in Aceh-Sumut?

According to the research problems outlined, this study aims to: a. determine the effect of the training program for PUSLATDA JATIM athletes on shooting and pointing performance in preparation for PraPON XXI in Aceh-Sumut. b. identify any progress in the PUSLATDA JATIM athletes' training program in terms of shooting and pointing performance for the upcoming PraPON XXI in Aceh-Sumut. Then, for the research benefits, this study aims to offer several benefits that may positively impact various

stakeholders, including a. measuring the program of PUSLATDA JATIM athletes' training for the PraPON XXI in Aceh-Sumut. b. enhancing the shooting and pointing technique capacities of PUSLATDA JATIM athletes.

2. LITERATURE REVIEW

The fundamental techniques in the sport of petanque are twofold: shooting and pointing. These techniques are essential for gameplay, enabling athletes to score points effectively. Suwiwa (2022), basic techniques are also divided into two categories: throwing for pointing and throwing for shooting. Additionally, before mastering shooting and pointing, understanding the correct way to hold the ball is equally important. Consider the following:

- How to hold a ball

In the game of petanque, players must know how to properly hold the ball. The technique for holding the steel ball (bosi) varies for each individual; some use four fingers, while others use five. This depends on the athlete's needs and training habits developed from the beginning. The first step in holding the ball is to place it in the palm with a grip that is not too tight, keeping the thumb close to the other fingers. According to Souef (2015: 32-33), releasing the ball is the most crucial part of the throwing technique, as the wrist and fingers will open simultaneously, allowing the ball to be released from the grip. Each player has a different ball size suited to their finger length. Below is an illustration showing the correct way to hold the steel ball.



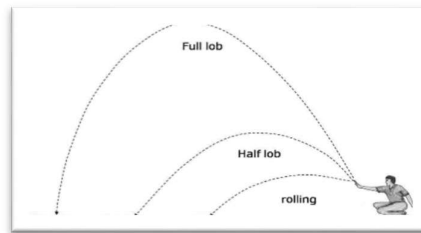
Picture 1 How to holding the ball

Steps for holding the steel ball in the sport of petanque:

1. Place the ball on your palm with the palm facing upwards.
2. Grip the ball with your fingers while turning your palm downwards.
3. Position your thumb beside the ball to act as a support, as shown in the image.
4. Feel the ball's contact with the skin of your palm as comfortably as possible.
5. Make sure the ball does not drop before you throw it.

- Pointing

Pointing in the initial throw that athletes commonly use to bring the iron ball closer to the wooden target ball. Additionally, this throw can be applied in subsequent turns to score points by shifting or pushing either the opponent's or one's ball (Zainuddin *et al.*, 2022). This technique includes three types: rolling, half-lob, and full-lob. Essentially, pointing is used to place the iron ball close to the target. Below is a depiction or visualization of this technique.



Picture 2 Pointing
Source: Zainuddin et al, 2022

Similarly, Sandra (2016) explains that the pointing technique is divided into three types:

1. **Roll** - a throw that travels smoothly along the ground.
2. **Half lob or soft lob** - a semi-circular throw in which the iron ball lands near the target.
3. **Full lob** - a throw directed straight at the target, following a nearly vertical arc. For each individual, some use four fingers, while others use five, This depends on the athlete's needs and training habits developed from the beginning.

- Shooting

In the game, shooting is used to either eliminate the opponent's ball or to push one's ball closer to the wooden ball. According to Bustomi (2020), the technique most commonly employed to win the match is shooting. As Pelana (2019) states, shooting is a technique to distance the ball. This technique is divided into three types: shot on the iron, shot-shot, and ground shot. Sandar (2016) also offers another perspective, providing a visual breakdown of shooting into three types as follows:

1. Shooting on the iron



Picture 3 Shooting shot on the iron
Source: Rasyono & Setiowati,2022

2. Shot-shot



Picture 4 Shooting shot-shot
Source: Rasyono & Setiowati,2022

3. Ground shot



Picture 5 Shooting ground shot
Source: Rasyono & Setiowati,2022

Thus, the differences among these three shooting techniques are based on the target's drop point. The technique is employed by adapting to the field conditions and the result of the athletes's training.

3. METHODS

This study employs a research and Development (R&D) method, a research approach aimed at producing specific products and evaluating their effectiveness (Okpatrioka, 2023). This process includes several stages, starting from identifying problems or needs, developing a concept or model, conducting preliminary testing, and then evaluating and refining the product based on trial results. In the context of sport research, R&D can be used to design training programs or new techniques intended to improve athlete performance. Once the product is developed, trials are conducted to ensure its effectiveness in achieving the desired objectives, such as enhancing athletes' skills or performance. If proven effective, the product can then be applied on a boarder scale.

4. RESULTS

Based on the results of a training program lasting approximately one year, the training provided by the coach has significantly improved the shooting and pointing techniques of PUSLATDA JATIM athletes. Anjani Dwi Apriliah, an athlete from PUSLATDA JATIM, shared that the program given by the coach has enhanced her shooting and pointing techniques. Consequently, she delivered an impressive performance at the XXI Aceh-Sumut Pre-National Sports Week (PraPON), earning three gold medals and one silver. Anjani was not the only athlete to experience improvements in shooting and pointing techniques; all PUSLATDA JATIM athletes reported similar progress. The training program provided by the PUSLATDA JATIM coach effectively enhanced their shooting and pointing results.

5. DISCUSSION

In this research, the discussion section serves to provide a deeper understanding about petanque of the research findings, as follows:

- Petanque

Essentially, every game has rules that serve as guidelines for the continuity of the game. Game rules can either be standardized or flexible, depending on the region. Games with non-standardized or flexible rules are typically traditional games or minor games. In contrast, those with standardized rules are larger games, one of which is the sport of petanque. Petanque consists of several competition formats, including singles, doubles, triples, and shooting, all of which can be played by all genders gender (Agustina & Priambodo,2017). Each format has different regulations, starting with singles, doubles, triples, and shooting.

Players must first toss a coin to determine who will throw first. After that, they will throw by entering the circle. The circle's position must be at least 1.5 meters from the jack or wooden ball of the opponent's playing area. Additionally, the circle must be at least 50 centimeters away from any obstacles to be considered valid. If this distance is not met, the circle must be adjusted by shifting its position. The wooden balls thrown must be within a distance of 6 to 10 meters from the player's circle, with no closer than 0 centimeters and at least 50 centimeters away from obstacles and the end line. Similarly, a wooden ball must be at least 1.5 meters away from other wooden balls and the circle.

Players must also adhere to the one-minute rule. This rule means that players only have one minute to throw the ball; if they exceed this time, they will receive a yellow card, but their throw will still be considered valid. The term "sudden death" refers to the last inning when both teams have the same score. If the wooden ball goes out of bounds, it must be returned to its original marked position. A player is declared the winner by reaching a score of 13 first or having a higher score than their opponent if time is limited. The timing is typically determined by each organizer. However, at the international level of petanque, the rules stipulate that a player must reach 13 points first to be declared the winner and prevent their opponent from achieving that score (Asmawi & Lubis, 2020; Mumpuniarti *et al.*, 2021).

- Problem Identification

According to observations made by the PUSLATDA JATIM coaches, athletes who have recently joined the PUSLATDA JATIM team are generally lacking in their shooting and pointing techniques. Many athletes struggle with their shooting techniques, which often lack the necessary height or arc, resulting in inconsistent accuracy. Similarly, the pointing technique is not yet consistent, particularly in terms of landing pointing, and also lacks the required height or arc. Based on the identified issues faced by the athletes, we can conclude that the provision of an inappropriate training program can adversely affect athletic performance. Therefore, the coaches at PUSLATDA JATIM are developing a targeted training program to address the specific problems related to shooting and pointing techniques.

- Exercise Program

The petanque shooting training program during the preparations for the Bali 2023 Pre-National Sports Week (PraPON). Throughout the PraPON preparations, the coach provided a variety of training exercises, including the following:

1. Daily exercise program

Pointing program



Picture 6 Pointing Program



Description: This pointing program requires players to pass two obstacle balls and then land within the pointing circle, with a target of successfully placing 10 balls.

Benefit: This program hones players' sensitivity to the drop point and stopping position of the ball when encountering obstacles.

Shooting program



Picture 7 Pointing Program

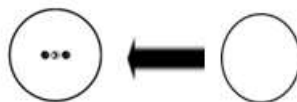


Description: In this pointing program, the ball must land within the circle and bypass two obstacles, aiming for 10 successful placements.

Benefit: This program helps control the throw; the easiest approach is for the athlete to point to the left, as seen in the illustration. However, pointing from other angles is acceptable, provided the athlete maintains control over the throw.



Picture 8 Top Level Shooting Program

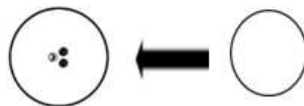


Description: This is a partner exercise, where shooting occurs from a distance of 6–9 meters, moving back one distance increment with each set. Three balls are shot sequentially from above, direct 3 (3 sets). The rule is that if a ball misses, the turn alternates with the partner.

Benefit: This pointing program requires players to pass two obstacle balls and then land within the pointing.



Picture 9 White Ball Shooting Program

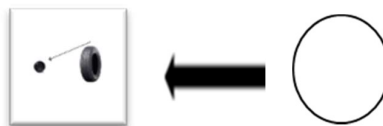


Description: This partner-based program involves shooting at a white ball from a distance of 6–9 meters. It uses a direct shooting sequence of 5 (1 set). As with the previous program, if a shot misses, turns alternate between partners.

Benefit: This program enhances shooting accuracy and focus on target obstacles for the athletes.



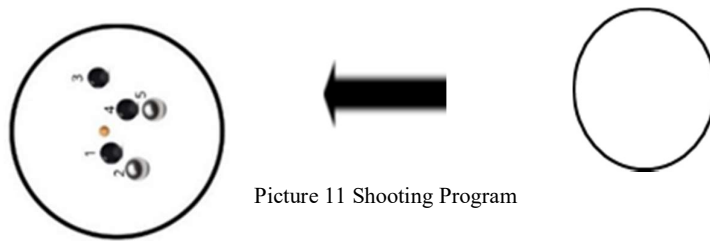
Picture 10 Through Tire Shooting Program



Description: Shooting is performed from a distance of 6–9 meters, aiming for 10 hits while passing through a hoop. If a shot hits the hoop, an additional 3 points are added.

Benefit: This program refines athletes' concentration and helps them develop a higher or more controlled trajectory in their throws.

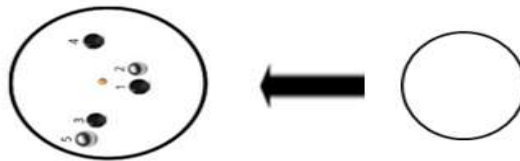
2. Training Program Nearing Competition



Picture 11 Shooting Program

Description: The black ball belongs to the opponent; our objective is to score 5 points, which must be achieved through shooting. The game is played from distances of 7.5 and 8 meters.

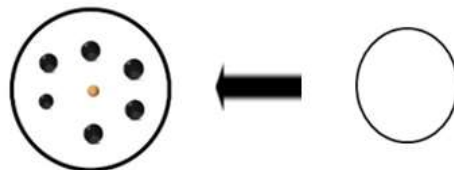
Benefit: This program trains athletes' focus, improves eye-hand coordination, and strengthens mental resilience.



Picture 12 Shooting Program

Description: The black ball represents the opponent's ball, and the goal is to score 5 points. This program can involve either pointing or shooting, from a distance of 6–8.5 meters.

Benefit: This program improves athletes' focus, hand-eye coordination, and mental resilience.

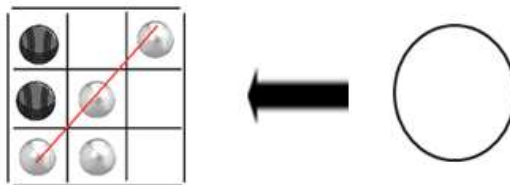


Picture 13 Shooting Program

Description: This program resembles a standard game, with the twist that the balls within the circle belong to the opponent. The athlete has six balls and must score points up to 11. Either pointing or shooting techniques may be used, from a distance of 6–9 meters.

Benefit: This program builds athletes' concentration, hand-eye coordination, and mental toughness.

Training Program Nearing Competition



Picture 14 SOS Game Program

Description: Similar to the game SOS, both teams throw in turns. Each square can contain only one ball (considered as the first ball in that square). However, ownership of the square isn't established until a player successfully shoots their ball into it. Players may use either pointing or shooting techniques. The player who forms three aligned squares wins. This exercise is performed from varying distances.

Benefit: This program trains athletes to concentrate on decision-making, hand-eye coordination, and mental resilience.

In addition to these training programs, athletes can incorporate shuttle runs to improve VO₂max. Increased oxygen uptake (VO₂max) is driven by the intensified training, as muscles require a higher oxygen supply during active movement. This oxygen demand increase occurs primarily because nearly all energy (ATP) used during endurance training, such as aerobic exercise, is regenerated in the mitochondria through oxidative metabolism (Jatmiko et al., 2024). This is particularly beneficial for petanque athletes, as matches can last several hours.

6. CONCLUSION

Based on the results from training sessions and the 2023 Bali Pre-PON petanque competitions, the petanque athletes from East Java achieved commendable performances, securing 4 gold, 1 silver, 3 and 4 bronze medals. This demonstrates the positive impact of the training program provided during the preparation period. It is hoped that these achievements will inspire the athletes to train harder while staying humble. Skills that are continually refined become sharper, whereas superior abilities without regular practice will eventually fade.

7. LIMITATION

It is acknowledged that this study has certain limitations to ensure the discussion remains focused especially on addressing a particular issue. The scope of this study is limited to the development of shooting and pointing exercises in petanque, with subjects comprising East Java athletes preparing for the XXI Pre-National Sports Week (PraPON) in Aceh-Sumut, using the Research and Development (R&D) methodology.

8. REFERENCES

- Agustina, A. T., & Priambodo, A. (2017). Hubungan antara tingkat konsentrasi terhadap hasil ketepatan shooting olahraga petanque pada peserta Unesa Petanque Club. *Pendidikan Olahraga dan Kesehatan*, 5(3), 391–395.
- Asmawi, R. M., & Lubis, M. (2020). Petanque: Mental training and kinesthetic perception of shooting accuracy. *Journal of Physical Education*, 9(3), 185–191.
- Bustomi, A. O., Hidayah, T., Okilanda, A., & Putra, D. D. (2020). Analisis gerak pointing pada olahraga petanque. *Journal Sport Area*, 5(1), 65–75. [https://doi.org/10.25299/sportarea.2020.vol5\(1\).4807](https://doi.org/10.25299/sportarea.2020.vol5(1).4807)
- Eko Cahyono, R., & Nurkholis. (2018). Analisis backswing dan release shooting carreau jarak 7 meter olahraga petanque pada atlet Jawa Timur. *Jurnal Prestasi Olahraga*, 1(1), 1–5.
- Jatmiko, T., Kusnanik, N. W., Nurhasan, N., Muhammad, H. N., & Purwoto, S. P. (2024). Increase of VO2 max after 8 weeks tuja shuttle run exercise for athletes in the 14-17 year age group. *Retos*, 55(April), 575–580. <https://doi.org/10.47197/retos.v55.103973>
- Maulana, G. W., & Bawono, M. N. (2021). Peningkatan imunitas tubuh lansia melalui olahraga pada saat pandemi COVID-19. *Keolahragaan*, 09(03), 211–220.
- Mulya, G. (2020). Pengaruh latihan imagery dan koordinasi terhadap keterampilan shooting pada olahraga petanque. *Journal of SPORT (Sport, Physical Education, Organization, Recreation, and Training)*, 4(2), 101–106. <https://doi.org/10.37058/sport.v4i2.1754>
- Mumpuniarti, M., Burhaein, E., & Phytanza, D. T. P. (2021). Phenomenology study on the measurement and availability of psychosocial instruments based on video observation in the unified sport program for children with intellectual disabilities in Indonesia. *Sport Science*, 15, 48–56.
- Okpatrioka. (2023). Research and development (R&D) penelitian yang inovatif dalam pendidikan. *Jurnal Pendidikan, Bahasa dan Budaya*, 1(1), 86–100.

- Pelana, R., Irfansyah, A. R., & Setiakarnawijaya, Y. (2019). Study of correlation between power of the arm muscle and ROM (range of motion) of shoulder with the results of 9 meters distance shooting in petanque athlete faculty of sport science state university of Jakarta, Indonesia. *European Journal of Physical Education and Sport Science*, 5(9), 8–18. <https://doi.org/10.5281/zenodo.3228919>
- Purnomo, A., & Yendrizar. (2020). Effect of hand-eye coordination, concentration and belief in the accuracy of shooting in petanque. *Proceedings of the International Conference on Physical Education (ICPE 2019)*, 460, 90–96. <https://doi.org/10.2991/assehr.k.200805.027>
- Rasyono, R., & Setiowati, A. (2022). Hubungan koordinasi mata tangan dan kelenturan terhadap hasil precision shooting pada atlet petanque Jambi. *Cerdas Sifa Pendidikan*, 10(2), 7–18. <https://doi.org/10.22437/csp.v10i2.14752>
- Saifulamri Alkhusaini, M., Nurhidayat, & Nurhidayat. (2021). Keterampilan shooting pada permainan petanque. *Jurnal Porkes*, 4(2), 69–75. <https://doi.org/10.29408/porkes.v4i2.3865>
- Sandra, D., Argueta, E., Wachter, N. H., Silva, M., Valdez, L., Cruz, M., Gómez-Díaz, R. A., & Casas-Saavedra, L. P. (2016). Profil BMI, BMR dan kebutuhan kalori harian atlet nasional petanque Indonesia. *Revista CENIC. Ciencias Biológicas*, 152(3), 28.
- Sinaga, F. S. G., & Ibrahim, I. (2020). Analysis biomechanics pointing dan shooting. *Jurnal Ilmiah Ilmu Keolahragaan*, 3(3), 66–75.
- Suwiwa, I. G., Astra, I. K. B., Ganesha, Muliarta, I. W., & Mashuri, H. (2022). Development of video media basic techniques of petanque game. *Ilmu Keolahragaan*.
- Yarmani, & Defliyanto. (2020). Pelatihan dan sosialisasi olahraga petanque bagi guru PJOK pada MGMP Sukaraja, Kab. Seluma. *Jurnal Ilmiah Pengembangan dan Penerapan IPTEKS*, 18(1), 12. <https://ibnumanshur19.wordpress.com/2015/11/20/sejarah-petanque-indonesia/>
- Zainuddin, M. S., Usman, A., Kamal, M., Abduh, I., & Wahyudi, A. S. B. S. E. (2022). Analisis keterampilan olahraga petanque Sulawesi Selatan. *Tadulako Journal Sport Sciences and Physical Education*, 10, 1–9.