

The Role of Physical Condition as the Basis for Improving the Performance of Amputee Football Athletes at PERSAS Surabaya Club

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ABSTRACT

Objective: This study aimed to enhance the athletic performance of amputee soccer players from PERSAS Surabaya through structured physical tests and awareness of a healthy lifestyle. The focus was on measurable training programs, nutrition, and rest to improve performance and immunity. **Method:** The program was conducted by the Physical Education team from Universitas PGRI Adi Buana Surabaya. The activities included planning, coordination with the PERSAS club management, designing physical tests, conducting simulations, socialization, and implementing the tests. A total of 15 athletes and 2 coaches participated. **Results:** The physical test results provided a foundation for developing tailored training programs. Emphasis on well-planned training schedules, proper nutrition, and adequate rest was identified as crucial for performance improvement. **Novelty:** This program uniquely addressed the specific needs of amputee soccer players by integrating comprehensive physical testing and emphasizing a holistic approach to health and fitness, which is rarely explored in similar contexts.

INTRODUCTION

Sports science is an interdisciplinary field that integrates knowledge from various disciplines to understand, analyze, and enhance the performance of athletes [1], [2], [3], [4]. The application of scientific principles in athlete training not only aids in the development of physical skills for [5], but also enhances the understanding of how the body functions in the context of sports. In this article, we will discuss various aspects of applying sports science in athlete training and effective strategies that can be used to improve their performance. Training in amputee football for the PERSAS club is very challenging and requires a systematic approach. In training theory, it is mentioned that there are four aspects of training that need to be considered and practiced diligently, namely 1) physical training, 2) technical training, 3) tactical training, and 4) mental training. Physical condition is one of the important aspects to improve sports performance [6], [7], [8], [9], [10], by conducting physical condition training, it enables athletes to follow the training program well. The development of comprehensive physical conditioning is very important, because without good physical condition, athletes will not be able to follow training sessions perfectly [11], [12], [13], [14].

Strong motivation also influences the success of athletes in achieving their performance [15], [16], [17]. Athletes must have intrinsic motivation that comes from within themselves to remain enthusiastic and consistent during the rigorous training

process in this situation [18], [19], [20], [21]. Rewards and recognition from external sources can also help athletes achieve higher levels of performance [22], [23]. The target group in this Community Service (PPM) activity is the coaches and amputee football athletes of the PERSAS Surabaya club. The profile condition of the target group provides an overview that the physical condition profile of the amputee football athletes of the PERSAS club will give the coaches an insight to create training programs.

Tabel 1. Field of work, targets, and potential targets.

No	Scope and Target	Potential
1	Establishing the right strategy to design an appropriate training program	Coaches do not yet have detailed knowledge of athletes' conditions before collecting data
2	Conducting sharing sessions with coaches about athletes' physical conditions	Most coaches are currently unaware and have not yet implemented training programs tailored to specific needs

RESEARCH METHOD

The preparation for the implementation of the Community Service activities has been meticulously organized. The process began with conducting field surveys to gain a better understanding of the community's needs. Next, through negotiations with partners, cooperation is built to support the success of the program. The preparation of the proposal is carried out as a guide in organizing the next steps, followed by obtaining the necessary permits.

After all administrative preparations are completed, socialization and training are conducted for the target groups. This process is followed by operational assistance aimed at ensuring the sustainability of the program. In the end, a Community Service report is prepared to document the results and lessons learned from the activities.

The outreach material includes understanding about immunity, theory, practice, and training evaluation to provide comprehensive knowledge to the participants. The implementation of the activities will take place at the Adi Buana Field in Surabaya in September 2024. This program aims to collect physical test data of amputee football athletes from the PERSAS Surabaya club and provide an overview to the coaches for consideration in creating a more effective training program.

During the implementation of the program, partner participation is very important. They serve as venue providers, participant coordinators, and training participants. Solid cooperation among all parties will ensure the success and positive impact of this

Community Service activity. The location of the activity will be at the Field of PGRI Adi Buana University Surabaya, East Java.

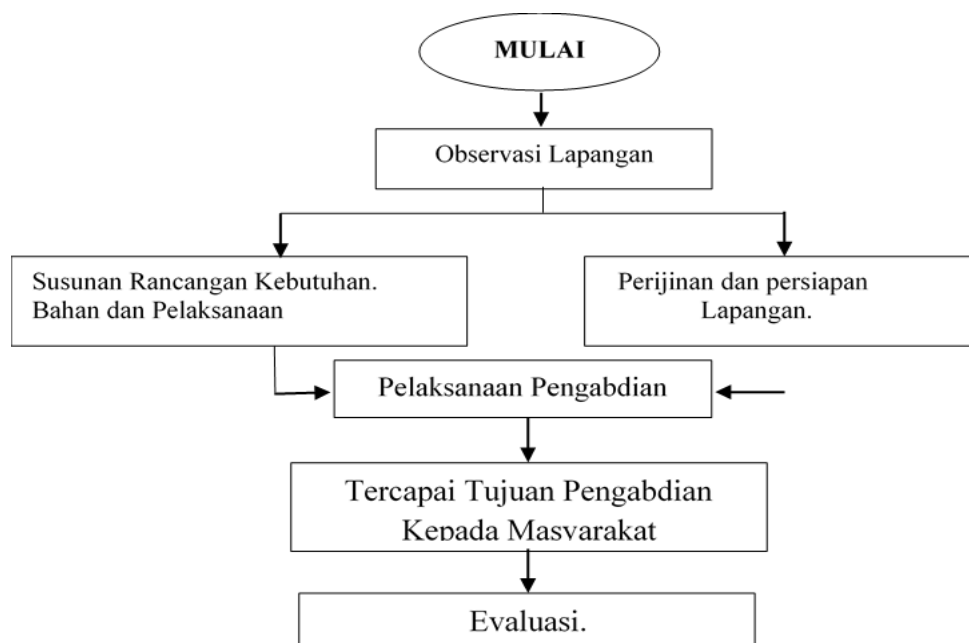


Figure 1. Diagram of the implementation of community service.

RESULTS AND DISCUSSION

This PPM activity has been successfully carried out by the Physical Education Study Program Team of the Teacher Training Faculty at PGRI Adi Buana University in collaboration with the PERSAS Surabaya amputee football club. This activity was conducted for the PERSAS amputee football club athletes and coaches. The PPM activity was attended by 15 athletes and 2 coaches. The implementation process of this PPM activity was carried out in several stages as follows:

A. Planning Stage

Activities carried out during the planning stage include:

1. First stage

The coordination of the preparation for this PPM activity began with the formation of a committee on August 8, 2024, through a program study meeting. There were several suggestions from the committee regarding the PPM theme. Then, based on a joint deliberation, it was decided that the PPM theme is **“The Role of Physical Condition as the Basis for Improving the Performance of Amputee Football Athletes of PERSAS Surabaya”**

2. Second stage

The PPM committee coordinated with the management of the PERSAS Surabaya amputee football club, including matters such as the venue, timing, necessary facilities, and target participants to be included. This coordination with the PERSAS amputee football club was conducted on August 14, 2024. The results of this coordination include

the implementation permit, the determination of the venue and time of implementation, the necessary facilities and infrastructure, the target participants to be invited, and the invitation procedures for the participants.

3. The third stage

Based on the results of the discussion, test norms have been formulated to be conducted during the PPM activities. The tests required by the athletes are physical tests conducted by the faculty team of the Physical Education Study Program.

4. The fourth stage

The subject conducted a simulation regarding the test that will be held. Meanwhile, the other committee members coordinated the final details related to the event schedule, certificate format, and other matters.

B. Socialization Stage

The activities carried out during the socialization phase involve introducing the theme and sub-theme as well as the activities that will be conducted during the PPM.

The implementation phase of the PPM activities held at the Universitas PGRI Adi Buana Surabaya campus consists of several tests presented in the following table:

Tabel 2. PPM activity schedule.

No.	Activity Name	Sub-Activities	Execution Time	Notes
1	Physical Test	1) Test includes: 1) BMI (Body Mass Index), 2) Blood Pressure, 3) Resting, 4) Skinfold Caliper, 5) Agility, 6) Flexibility, 7) Balance Beam, 8) Speed, 9) Sit-up, 10) Push-up	September 7, 2024, at 6:00 AM until finished	Successfully completed
2	Presentation and Explanation of Test Results	Presentation and explanation of physical test results		

C. Discussion of Activity Implementation

Community service activities regarding the physical condition profile of the PERSAS amputee football club athletes to support their performance have been carried out. This activity was attended by physical education lecturers from Adi Buana PGRI University Surabaya as testers, as well as the athletes and coaches of the PERSAS Surabaya amputee football club. In its implementation, the athletes were first given insights into the importance of physical tests as a fundamental basis for creating training

programs. This is related to the athletes' seriousness in undergoing the tests to obtain valid data.

From the physical test results of the athletes, the coaches can use this data as a reference in creating training programs that align with the athletes' weaknesses and strengths. The tests above are in accordance with the provided standards because they refer to The Nine Key Elements of Fitness 2005, so the training program measured based on data can be more reliably justified as correct because it aligns with the athlete's condition. There are several things to consider in the effort to maintain or improve the physical condition of athletes, including:

1. Training Program Planning

According to Bompa & Buzzichelli, the training phases are structured for physiological and psychological adaptation and are sequenced to develop specific performance components (physical, technical, and tactical) while enhancing the athlete's performance capacity [24]. In the context of Periodization, training follows a sequential approach to develop the athlete's skills and motor potential.

2. Rest

Rest also plays an important role in the recovery process and the improvement of training results to adjust the physiological adaptation of athletes to the training outcomes achieved. Physical recovery involves the healing process of muscles, connective tissues, and the nervous system after experiencing stress and fatigue during sports activities. Rest provides the body with time to repair and regenerate, which is crucial for preventing sustained injuries. The scientific literature highlights the importance of rest in injury management and the prevention of overtraining in athletes. In addition to repairing physical damage, rest is also key to the recovery of energy and glycogen.

CONCLUSION

Fundamental Finding: The community service activities (PPM) conducted—comprising physical test preparation, test simulations, socialization, and execution—provided a structured foundation for developing athlete training programs. The results emphasized the critical role of systematic training, nutrition, and rest in enhancing the performance of amputee football athletes at PERSAS. **Implication:** The tailored training program derived from these activities is expected to optimize both physical performance and overall health of amputee football athletes. Coaches can utilize the findings to customize training regimens, addressing individual weaknesses and fostering stronger immunity and disease prevention. **Limitation:** The study was limited by its focus on a single club (PERSAS) and lacked longitudinal data to assess the sustained impact of the training program. Additionally, broader variables such as psychological factors and external environmental influences were not considered comprehensively. **Future Research:** Future studies should explore the long-term effects of structured training programs on performance and health outcomes for amputee football athletes. Expanding

the scope to include multiple clubs and integrating psychological and environmental factors can provide a holistic understanding of athlete development.

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