

Development of imagery and self-talk exercises to improve the shooting game ability of Nusantara petanque club athletes

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Abstract

This study aimed to develop imagery exercises to improve the shooting game skills of Nusantara Petanque Club athletes. This research and development use the Research and Development method with the modified ADDIE model. (1) needs analysis, (2) product design, and (3) expert validation tests carried out by three validators, namely psychologists, petanque coaching experts, and petanque trainer experts. A needs analysis was conducted through direct interviews with Nusantara Petanque Club trainers. From the needs analysis results, three mental exercise products are packaged in an audio podcast, including imagery relaxation, self-talk, and anxiety. After the product has been made, an expert validation test is carried out by three validators, namely (1) a psychologist, (2) a petanque coaching expert (3) a petanque trainer expert. The validation results for relaxation imagery podcast audio get 85.71%, self-talk audio podcast at 85.71%, and anxiety podcast audio get 85.71%. Then, we tested the product in groups of 5 athletes who were randomly selected based on ability. In the group test, the results for relaxation, self-talk, and anxiety podcasts were 92.13%. Based on the small group test, the audio podcast product is declared feasible and can be used.

Keywords: development, self-talk, relaxation imagery, anxiety, shooting petanque.

INTRODUCTION

Achievement is an important thing that needs to be considered in sports because the factor that affects the success of sports is the discipline of athletes. Some aspects that determine the creation of exemplary achievements are facilities and infrastructure to support training, the psychological state experienced by athletes, the skill abilities possessed by athletes, and physical abilities (Effendi, 2016). Meanwhile, according to (Pityn et al., 2019), to maintain athletes' training performance, the components that need to be considered to improve achievement are mental, physical, technical, and tactical exercises. Of the four components, of course, they must be interrelated and related in order to create exemplary achievements. The athlete's achievements are challenging without one of

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the four components. To support the achievements of athletes, mental or psychological roles can determine a person's ability in a match (Schmaltz et al., 2017). Psychological factors are essential in determining achievement because 80% of success is determined by this factor (Adisasmito, 2007). Disorders experienced by athletes that often occur are psychological factors, including feeling anxious, difficulty concentrating, and not being confident.

Petanque sport is a sport that requires accuracy and accuracy in throwing an iron ball with both feet must be in a circle (Sutrisna et al., 2018). This sport is classified as a simple sport because this sport can be played by all circles of society and is not limited to age groups (Sinaga et al., 2019). This sport can be played anywhere and anytime because this game does not require a large field and can be played in a field with hard, grassy soil and other soils. However, it uses hard-textured soil for national or international competitions (Pelana, 2016).

In petanque games, two basic techniques are essential to pay attention to, including shooting and pointing. Pointing in petanque games is a technique of delivering an iron ball as close as possible to the target ball / wooden ball, while shooting in petanque games is a technique of delivering an iron ball to keep the opponent's iron ball close to the target ball (Boka) (Sutrisna et al., 2018). So with this, the difficulty in shooting in a petanque game is excellent compared to pointing because shooting requires good accuracy and concentration to hit the target perfectly (Lubis & Permadi, 2020). Thus, it is necessary to do mental training, namely imagery and self-talk, which leads to the psychology of athletes in shooting (Irmansyah et al., 2018).

Imagery is a brain language focusing on increasing mental strength and emotional feelings (Rohman & Tausikal, 2017). Imagery is a form of image in mind and is carried out consciously to achieve goals and solve problems (Iswana, 2019). The benefits of imagery are repeating new movements and improving concentration, self-confidence, emotional control, practice skills, and strategies (Akbar et al., 2019). According to

[Hidayat et al. \(2019\)](#), imagery exercises greatly influence the improvement of athletes' skills, strategies to be used in games, and athletes' preparation to look confident. Self-talk is a mental exercise in which a person talks to himself to influence himself to form a strategy in terms of sports ([Pratama et al., 2020](#)). When the athlete does self-talk, he will feel an emotional reaction which will make the whole body comfortable and calm because the muscles throughout the body relax, which can affect the athlete's appearance ([Putra & Jannah, 2017](#)).

Imagery training is one of the techniques used to make it easier for athletes to learn mental exercises. For example, petanque athletes can improve their shooting skills by using imagery exercises to train the athlete's mentality. Imagery training is an effective method for athletes if they want to have very complex skills. Thus, imagery is the repetition of movements, events, situations or experiences in mind, done deliberately and can be helpful for the athlete; besides that, it can be used to help the athlete improve his excellent performance. This imagery training technique can improve the athlete's focus, confidence, and performance. According to [Chairullah et al. \(2018\)](#), the effect of imagery training on the basketball can improve shooting ability, this is the result of a pretest of 26.67 and a posttest of 68.89. In volleyball, in increasing the accuracy of smashes, imagery training has a significant influence of 25.09% ([Nurhayati, 2019](#)). And imagery training also significantly impacts the sport of gymnastics ([Firmansyah, 2011](#)). In addition, imagery exercises can be used in competitions to develop strategies and create focus in the game they face ([Eko Cahyono & Nurkholis, 2018](#)).

In petanque sports, it is very rare to conduct research related to aspects of psychology, especially in imagery exercises. After reading the relevant literature, researchers are interested in finding out more by researching imagery exercises that are more specific to the sport of petanque. Nusantara Petanque Club or can be called (NPC) is a petanque club located in Kediri City. Nusantara Petanque Club has athletes in the early age group and the adolescent age group, with 5 (five) athletes for early

childhood and 25 athletes for adolescent age. For the championships that have been participated by the Nusantara Petanque Club itself, there have been many championship events in Jakarta, Central Java, Semarang, Bali and many more. The championship that followed in petanque sports, whose character is a sport that requires concentration, the Nusantara Petanque Club itself has implemented technical, tactical, physical, and mental training. Nusantara Petanque Club applies mental training by visualizing videos in its mental training. Besides that, athletes must have idols to imitate the style of play and also be able to motivate themselves. Then athletes are also encouraged to develop themselves through self-talk, managing anxiety when competing, and relaxing.

Research conducted by (Linggar et al., 2021) in the martial arts sport shows that the development of imagery training can have an effect on increasing self-confidence in athletes, but the research still has limitations, namely the scrip developed is still generally not yet specific. Furthermore, yoga training is also carried out to increase concentration so athletes can master themselves and control breathing. However, mental training has not been integrated into the training schedule, and athletes do mental training independently only. So from the previous research, research was carried out on the development of imagery exercises in a more specific petanque sport. Researchers tried to develop three imagery exercise products packaged in the form of audio podcasts: imagery relaxation, self-talk, and anxiety.

METHOD

The method used in this study is to use the Research and Development (R&D) method. Research and development (research and development) is a method that produces or develops a particular product to suit the needs and can be directly utilized (Haryanto et al., 2015).

This research and development aim to create a product in the form of audio podcast imagery to improve shooting skills in petanque sports. In this research and development method, researchers use the ADDIE model

development method (Anglada, 2007) for the procedures carried out, including 1) analysis stage, 2) design, 3) development, 4) implementation, and 5) evaluation stage. However, researchers used a modified ADDIE model.

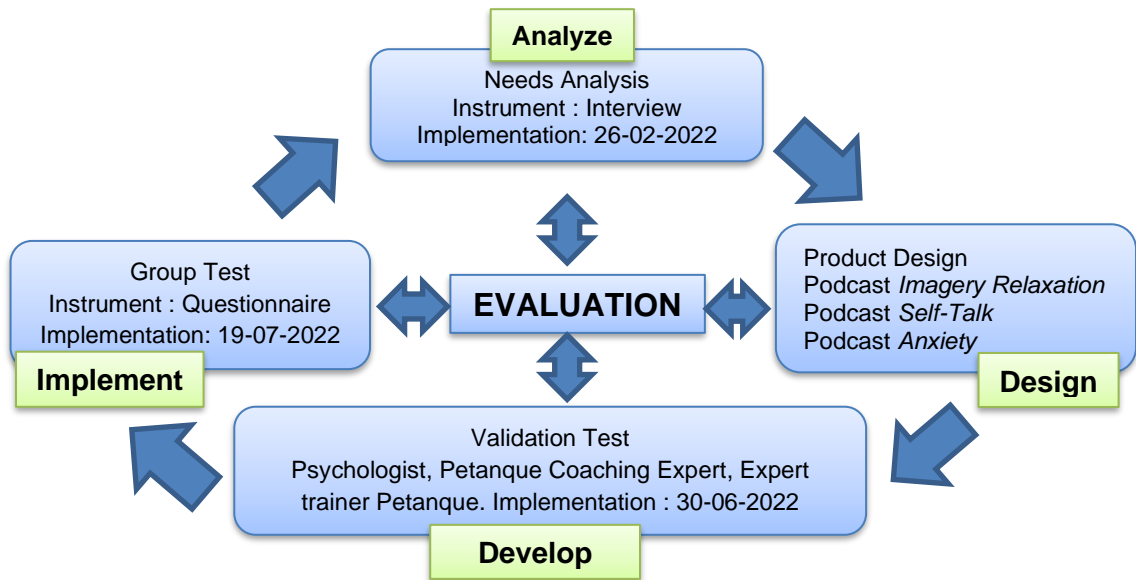


Figure 1. The flow of The Research and Development Process

This research was conducted at the Nusantara Petanque Club in Kediri City. This study aimed to develop audio products in the form of imagery exercises to improve the shooting game ability of Nusantara Petanque Club athletes. With the training media created, it is hoped that it can help coaches in the training process to improve shooting skills in petanque athletes.

The subjects in this research and development are coaches and athletes of the Nusantara Petanque Club and validators of one expert in the field of psychology, one expert in the field of sports coaching, and one expert in the field of petanque coaches. The data obtained will be in the form of qualitative data and quantitative data.

Table 1. Research data

Stages of Research	Research Subjects	Number of Subjects	Data Type
Needs Analysis	Coach of Nusantara Petanque Club	1 Person	Qualitative
Product Design	-	-	Qualitative
Expert Evaluation	Psychologist, Petanque Coaching Expert, Petanque Trainer Expert	Three people	Qualitative & Quantitative
Product Revisions	-	-	Qualitative
Group Trials	Athletes of Nusantara Petanque Club	5 Athletes	Quantitative
Final Product	-	-	Quantitative

Qualitative data were obtained through interviews with Nusantara Petanque Club coaches and questionnaires filled out by athletes. Meanwhile, quantitative data is obtained through expert validation tests.

RESULT

Needs Analysis Results

Based on the analysis conducted by the interview method at the Nusantara Petanque Club coach, there are problems and obstacles experienced by athletes. These problems and obstacles are: (1) Athletes doing mental training unstructured and casually, not integrated with the training program, and (2) athletes' moods quickly fluctuate, which is the main problem experienced by Nusantara Petanque Club athletes. Their mental stability was the problem that must be solved.

Based on the needs analysis results, it was found that the coach of the Nusantara Petanque Club wanted a variety of mental exercises to improve the stability of the athlete's mood, which affects the shooting ability in petanque sports. The Nusantara Petanque Club coach also supports the development of imagery exercises in audio podcasts to improve shooting skills. Because the imagery exercises to improve the shooting game in petanque sports are very supportive, athletes have a better mentality. Furthermore, the results of the data analysis are used to design the product.

Product Development Phase

When making a product, of course, requiring excellent and careful planning is an essential part of making a product. The thing that must be done in making a product is to make a product design in the form of a script. What must be considered and considered in making a product is 5 W (What,

When, Where, Why, Who) + 1 H (How) (Williams et al., 2013). Meanwhile, the steps that must be done when creating scrip imagery are (1) Script design, (2) Writing scripts, (3) Script delivery, and (4) script evaluation (Williams et al., 2013). After the product is completed, an expert validation test involves three expert validators: psychological experts, petanque coaching experts, and petanque trainer experts. Validators will determine the level of product validity. This imagery podcast audio product is later packaged for publication through Spotify. At this time, many people use digital technology to find information and as a learning medium that is easily accessible to everyone (Rosell-Aguilar, 2013). Technology is currently creating very impactful changes that are very good for humans. Technology and communication development add innovation and strategy to sports (Fadli, 2016). The ease in the era of globalization to access media can be understood by athletes, and the increase in audio visualizations is expected to make it easier for athletes to provide training facilities that are easier to understand.

This product has advantages and disadvantages. The strength of this product is easily accessible. It can be used anytime and anywhere using electronic telecommunications devices such as laptops, mobile phones, computers and others as long as the device is connected to the internet network. Meanwhile, the disadvantage of this product is that it is difficult to do in a crowded place because this podcast audio must be done in a quiet and comfortable place. However, the solution to overcome the problem can be finding a quiet place to minimize the disturbances.

Expert Validation Test Results

Three validators validate this product: one psychologist, one petanque coaching expert, and one petanque trainer expert. The aspects assessed or validated are: (1) the suitability of the product's shooting ability; (2) the suitability of the products for athletes at the range of 12-20 years; (3) the suitability of the product with tone and rhythm for imagery, (4) the attractiveness of the discussion material for the exercises of imagery

relaxation, self-talk, anxiety for adolescents, (5) background noise/background, (6) clarity of tone of voice, and (7) sentence collapse.

The results of this study were obtained from various suggestions and inputs from several expert validators such as psychologists, petanque coaching experts, and petanque trainer experts to provide comments and suggestions on the product of the imagery relaxation, self-talk, and anxiety podcast. Validators o give comments and suggestions: (1) add relaxing sounds, such as the sound of water or birds; (2) give instructions on how to implement the exercises. Meanwhile, from the coaching expert, petanque (1) in terms of voice is still not clear and a little too fast (intonation) (2) use simpler words so that they are easy to understand. Moreover, finally, the advice and input of the expert petanque trainer (1) the background sound appear (2) add the sound of birds, wind, and water.

The validation test results carried out by the three validators are then revised according to the validator's suggestions and comments to improve the product and can be continued at the group test stage.

Table 2. Results of the validation of the podcast imagery relaxation, self-talk, and anxiety

No	Component	Validator			Average
		Psychologis t	Petanque Coaching Expert	Expert Trainer Petanque	
1	Imagery Rilaksasi	89,28%	75%	92,85%	85,71%
2	Self-talk	89,28%	75%	92,85%	85,71%
3	Anxiety	89,28%	75%	92,85%	85,71%
Information					Valid Enough

Based on the results of product validation tests conducted by three validators, the final results for audio podcast imagery were obtained by 89.28% for the results of psychologists, 75% for petanque coaching experts, and 92.85% for petanque trainer experts. As for the audio podcast, the self-talk obtained the final result of 89.28% for psychologists, 75% for petanque coaching experts, and 92.85% for petanque trainer experts. Moreover, finally, the anxiety podcast audio product obtained a final result of 89.28% for psychologists, 75% for petanque coaching experts, and 92.85% for

petanque experts. Thus, of these three development products, they are classified as quite valid and feasible to use with a percentage of 85.71%.

The validation test results carried out by the three validators are then revised according to the validator's suggestions and comments so that the product is better to reach the final product and can be continued at the group test stage.

Group Trial Results

This product experiment was carried out on five athletes of the Nusantara Petanque Club. The assessment of aspects is about: (1) the suitability of the products to improve shooting ability, (2) the suitability of the products for athletes in the range of 12-20 years, and (3) the suitability of the product with tone and rhythm for imagery, (4) the attractiveness of the products for athletes at the range 12-20 years, (5) background noise/back sound, (6) clarity of tone of voice, and (7) sentence collapse. The data processing results using Tse showed that the relaxation imagery podcast obtained 92.13%, which belonged to the excellent category. Self-talk podcasts obtained 92.13% in the very good category, and anxiety management podcasts obtained 92.13% in the reasonably good category. Thus it can be concluded that the three products belong to the category of valid and usable.

Final Product Specifications

The research and development results show that three imagery training audio products can be produced as podcasts useful for improving shooting game skills in petanque sports at the Nusantara Petanque Club.

Table 3. Product specifications audio podcast imagery relaxation, self-talk, anxiety

Final Product Podcast Imagery Rilaksasi, Self-Talk, and Anxiety		
Concept	Variable	Indicator
Development of imagery exercises to improve shooting game capabilities packaged in the form of podcast audio	Podcast audio display ● Understanding imagery relaxation, self-talk, and anxiety ● There is a guide to doing the exercises. ● A form of exercise imagery. ● The correct shooting technique. ● Imagery Rilaksasi = some exercises relax the muscles ● Self-Talk = There is a positive self-talk exercise to increase intrinsic motivation in the athlete. ● Anxiety = There are anxiety exercises to overcome tension and anxiety in athletes.	Podcast audio products in the form of imagery exercises

DISCUSSION

This research aims to develop this imagery exercise supplement to improve the shooting game ability of Nusantara Petanque Club athletes, which is packaged in the form of an audio podcast consisting of three podcasts: an imagery podcast, a self-talk podcast, and an anxiety podcast audio. All of those contain mental training materials suitable for the needs of the athletes. However, several essential things must be considered in developing a product. Firstly, podcast audio must be designed as attractively and as similar as possible according to actual conditions in the field. An athlete can perform perfect shooting movements by practising continuously and consistently. At this time, many coaches from various sports use a repetition method (drill) that is often used (Chairullah et al., 2018). A set of mental training supplements could complement the drill method to refine skills, and this research has shown the complete process of developing them using an imagery approach. Secondly, the need analysis results show that coaches want mental imagery training packaged in the form of audio podcasts, and the coaches of the Nusantara Petanque Club support research to improve shooting skills in petanque sports. Here,

an essential lesson of listening to the needs of athletes and coaches before developing a mental training program is highlighted, and they also are involved in the development process. The need analysis of this study was the trainer of the Nusantara Petanque Club, as well as the validators involving petanque trainer experts. Revisions are carried out according to suggestions and input from validators to refine the product. Finally, the group test stage also includes athletes from the same club, resulting in the final product. The strength and weaknesses of these products have been discussed too. Overall, the products have a feasibility percentage of 85.71% and a group test, resulting in 92.13%. The product is feasible to be used by all Nusantara Petanque Club athletes.

Similar studies have also been conducted that imagery exercises are applicable during exercise. Previous research ([Linggar et al., 2021](#)) found that imagery exercises are very influential in increasing self-confidence in martial arts athletes in the sparring category. The same thing is also done by ([Amin et al., 2022](#)) that imagery training can improve lay-up shoot skills in basketball. Meanwhile ([Nurhayati, 2019](#)) concluded that imagery training significantly influences. According to ([Firmansyah, 2011](#)), imagery exercises significantly influence gymnastics skills.

Meanwhile, in football, imagery training is very influential on shooting skills. The same thing is also done by ([Wibowo & Rahayu, 2016](#)) imagery training also affects shooting athletes. However, research about imagery training supplements in audio podcasts specialized to Petanque is still dearth. This study would add more diversity to the field of imagery application in sports, specifically to a particular skill of petanque.

This research and development have strengths and weaknesses. The strength is (1) the resulting product provides convenience in practising imagery self-talk, anxiety, and imagery relaxation. (2) Imagery exercises packaged as audio podcasts can enhance shooting in petanque sports. However, the weakness of this product is (1) the limited shooting category of petanque sports. (2) limited to topics of imagery, self-talk, and anxiety. (3) this development only reached the stage of validation tests, not yet

reaching the stage of group tests and product effectiveness tests through a series of experimental procedures.

CONCLUSION

From the research and development results, it can be concluded that this development has produced three imagery training products, namely imagery relaxation, self-talk, and anxiety which are packaged in the form of audio podcasts. Of the three products that have been produced, three expert validators have undergone the stages of expert validation tests and group tests that have received excellent and suitable categories for use. Finally, it can be concluded that the audio podcast produced is by the needs in the field and can be used by all athletes of the petanque club.

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