

Analysis of Calmness Training for Archery Sports for PORPROV Athletes in Malang Regency

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Abstract

The purpose of this study is to examine how calmness training affects archery competitors' performance as they get ready for the Malang Regency Provincial Sports Week (PORPROV). Calmness training, which incorporates breathing exercises, meditation, and visualization, is thought to help athletes become more focused and mentally calm, which in turn improves their accuracy when firing an archer. Twenty archery athletes from Malang Regency served as research samples for this study, which employed an experimental design with a pre-test and post-test methodology. Tests of shooting accuracy, anxiety surveys, and in-person observations of athlete behavior during practice and competition simulations were used to gather data. According to the findings, the athlete's shooting accuracy significantly improved from 60% to 82% after completing the tranquility training program for four weeks. Moreover, athletes' anxiety levels declined, with an average score falling from 60% to 40%. These modifications show that calmness training helps archery players perform better technically, focus better, and experience less anxiety. Based on the study's findings, it can be said that calmness training helps archery athletes perform better and ought to be a regular component of the training regimen for archery athletes in Malang Regency, particularly when they're getting ready for events like PORPROV.

Keywords: Calmness Training, Archery, Athlete Performance, PORPROV, Shooting Accuracy, Anxiety

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1. INTRODUCTION

One of the most crucial elements in enhancing an athlete's performance in the realm of sports is mental serenity. This composure involves the capacity to maintain concentration, regulate feelings, and think clearly—especially under pressure in a competitive setting. Archery is one of the sports that heavily depends on an athlete's level of composure because it demands intense focus, physical stability, and a strong mentality (Saputra & Sepdanius, 2023).

Archery demands accuracy and focus with each shot at a higher level of competition, like the Provincial Sports Week (PORPROV). For archery competitors, maintaining composure is therefore extremely important, particularly while dealing with the pressure of more intense competition. Athletes with self-control, concentration, and the ability to remain composed under pressure will have an advantage over those with poorer mental self-control (Juniarni Hardi, 2022).

Relevant studies on the effects of calmness training on archery. In particular, for archery athletes training for the Malang Regency Provincial Sports Week (PORPROV), this literature review seeks to give a thorough grasp of the significance of mental tranquility in sports. Sports Mental Calmness According to (Yachsie et al., 2021), mental calmness is the ability of an athlete to remain composed, steady, and concentrated under pressure. Mental clarity is crucial in sports because it can affect athletes' judgments and the bodily responses required to perform at their peak. Maintaining mental composure can help athletes cope better with the demands of competition, feel less anxious, and concentrate better on their goals (Nagara et al., n.d.).

Calmness's Function in Archery The sport of archery greatly depends on mental clarity and focus. Every movement in archery requires extreme focus and precision. Mental illnesses or an inability to regulate stress and worry are common causes of poor shots, which can impair an athlete's physical stability (Jones, 2018). Thus, mental serenity is crucial to preserving the caliber of every shot. An archer will perform more consistently and accurately if they can manage their stress and concentrate on the target (Utomo, 2018).

Techniques and Exercises for Calmness Athletes employ a range of calmness training methods to help them focus better and handle stress. Among the methods that are most frequently employed are: **Breathing Techniques:** Breathing techniques can help athletes relax, lower their anxiety levels, and sharpen their focus. In sports, breathing exercises are frequently employed to ease physical strain and enhance self-control (Yulianto et al., 2015). **Meditation:** The practice of mindfulness meditation helps people maintain present-moment awareness and steer clear of anxiety-inducing distractions. According to research, meditation can enhance concentration, focus, and mental serenity (Damarjati & Saputra, 2024). **Visualization (Mental Imagery):** The process of visualizing a competitive scenario or a successful shot in the athlete's mind is known as visualization or mental imagery techniques. This method can boost self-confidence and tranquility in athletes and help them prepare for difficult competition conditions (Yachsie et al., 2021).

Calmness Training's Impact on Athlete Performance Numerous studies have

demonstrated that training for tranquility can improve an athlete's performance, particularly in sports like archery that call for a high level of focus and emotional regulation. According to a study by (Bahri et al., 2023), athletes' performance in sports requiring mental serenity can be enhanced by stress-reduction strategies like deep breathing, meditation, and visualization. This study's findings also demonstrated that more mental tranquility is linked to improved decision-making under pressure, greater focus, and decreased anxiety. Archery athletes at KONI and PORPROV receive calmness training. The mental calmness aspect is a significant determinant of the match's outcome, according to the experience of archery athletes playing at the provincial level, especially in the PORPROV tournament. Athletes who receive stress and anxiety management training are better equipped to perform at their peak under the intense strain of competition. Therefore, one of the most important ways to get archery athletes ready for higher-level contests is to practice tranquility both individually and in groups (Nagara et al., n.d.).

Calmness Training's Significance for PORPROV Athletes in Malang Regency In the context of the PORPROV Malang Regency event, athletes competing in the archery branch must prepare mentally. It is anticipated that serenity training will assist athletes in maintaining focus and peak performance under mounting strain, especially given the increased level of competition. It is anticipated that athletes who practice mental tranquility will be able to lower their anxiety levels, focus better, and make wiser choices during competition.

The purpose of this analysis is to determine how calmness training might help archery competitors perform better, particularly those getting ready for the Malang Regency PORPROV competition. It is intended that by taking a methodical approach, an efficient training technique can be discovered to assist players in developing mental stability, which will enhance their focus and competitive accuracy. It is anticipated that the best calmness training method will help athletes perform better in competition, particularly in the archery branch.

Numerous methods that have been demonstrated to be successful in enhancing calmness and focus, such as breathing exercises, meditation, and visualization, can be used into well-designed serenity training. Thus, in order to prepare for the Malang Regency PORPROV, this study will investigate how these exercises affect archery athletes' performance.

2. METHOD

To better understand how calmness training affects archery athletes' performance in competition, a quantitative and qualitative research methodology will be employed in the analysis of calmness training for the sport among PORPROV Malang Regency athletes. The methodologies employed in this investigation are explained in detail below (Utomo, 2018).

2.1 Participants

Population: All archery athletes that were ready to compete in the PORPROV event and were part of the Malang Regency archery squad made up the study's population. Sample: Purposive sampling was used to choose the 20 archery athletes that would make up the research sample. The following criteria were taken into consideration when choosing the sample: 3. Athletes who are prepared to have their performance evaluated both before and after engaging in calmness training; 2. Athletes who are willing to adhere to a calmness training program over the research period; and 3. Athletes who actively practice with the Malang Regency archery squad. The training program for calmness, which incorporates breathing exercises, meditation, and

visualization, is the independent variable. The performance of archery athletes is determined by their ability to shoot accurately, focus, and maintain composure both throughout practice and competition (Juniarni Hardi, 2022).

2.2 Research Design

With a pre-test and post-test methodology, this study employs an experimental research design. Archery competitors in the PORPROV Malang Regency will be split into two groups under this design: an experimental group that receives calmness training and a control group that does not. The purpose of this study is to compare the performance of athletes before and after completing the tranquility training program.

2.3 Instruments

The instruments used to measure the variables in this study are as follows:

Archery Performance Test: Accuracy of shots in practice and competition simulations are used to gauge performance. To ascertain their degree of precision and consistency, each athlete will be required to shoot a series of arrows at a target at a predefined distance. The results of the shots will be computed.

Mental Calmness Questionnaire: A questionnaire measuring anxiety, tension, and attention will be used to gauge players' mental calmness. One such tool is the Sport Anxiety Scale-2 (SAS-2), which is intended to gauge both anxiety and calmness in sports.

Direct Observation: During calming exercises and match simulations, athletes' emotional states and behaviors are directly observed. Coaches and researchers make this observation to evaluate the athlete's capacity to control stress and anxiety.

2.4 Procedures

The research steps taken are as follows:

Sample Selection: Athletes who met the criteria were selected to participate in the study.

Pre-Test: Prior to beginning the calmness training program, athletes will complete a questionnaire to gauge their levels of tension and anxiety and an archery performance test to gauge their accuracy and focus.

Calmness Training Program: For four weeks, the experimental group will adhere to a calmness training program. This program consists of:

Breathing Exercises: Deep breathing techniques and focusing on breathing to reduce stress.

Meditation: Mindfulness meditation exercises to improve concentration and calmness.

Visualization: Visualization techniques to imagine a successful shot and increase confidence.

Post-Test: After 4 weeks, athletes will undergo the same archery performance test (post-test) to evaluate the changes that occurred after participating in the composure training.

Data Analysis: To determine how performance changed before and after taking part in the calmness training, both in terms of shooting accuracy and mental tranquility levels, the pre-test and post-test findings will be examined (Bahri et al., 2023).

2.5 Data Analysis

The data obtained will be analyzed using the following statistical techniques:

Descriptive statistics are used to explain the distribution, average, and sample characteristics of test results. The purpose of the Paired Sample T-test is to compare the mean scores on the performance and mental calmness tests before and after the calmness training program (Taufik & Mus'id, 2020).

Qualitative Analysis: To find patterns of change in athletes' mental composure and emotional control during training and competition, qualitative data from direct observation will be examined using thematic analysis techniques (Aviesena Aria Fierera, 2022).

3. RESULTS

The study's findings will describe how calmness training affects archery players' performance in preparation for the Malang Regency PORPROV competition. The study's findings, which are based on the previously described methodologies, include an analysis of the differences between the pre- and post-tests and an interpretation of the data gathered from the different instruments. The findings are as follows:

Archery Performance Test Results (Shooting Accuracy)

Before and after the tranquility training program, tests of archery performance were administered. The experimental group (athletes who participated in the tranquility training program) had notable changes, according to the findings of the shooting accuracy measurement.

Pre-test (Before Composure Training): The average shooting accuracy of athletes in the initial test was around 60% of the total shots made at the specified target.

Post-test (After Calmness Training): After following the calmness training program for 4 weeks, the average shooting accuracy of the athletes increased to 82%.

Analysis: These findings show that athletes who received tranquility training significantly improved their shooting accuracy. This rise might be ascribed to the athlete's improved focus and anxiety management skills following calming training during the shooting procedure.

Mental Well-Being Questionnaire Results

There were noticeable differences between the pre-test and post-test results on mental health questionnaires used to gauge athletes' levels of stress and anxiety, such as the Sport Anxiety Scale-2 (SAS-2).

Pre-test: Before participating in the calming training, most athletes showed high levels of anxiety with an average score of around 60% on the anxiety scale.

Post-test: After participating in the calmness training program, the average score for athletes' anxiety decreased significantly to 40%. This indicates a reduction in stress and anxiety among athletes.

Analysis: This decrease in anxiety levels indicates that the calming exercises applied (such as meditation and deep breathing) have succeeded in helping athletes reduce feelings of anxiety and stress that can interfere with their concentration while competing.

Direct Observation of Mental State and Behavior of Athletes

Athlete conduct changed significantly as a result of direct observation during training sessions and competitive simulations. Many athletes displayed symptoms of anxiousness before to engaging in the calming training, including hurried body language, trouble focusing on goals, and quickly agitated emotions. But following the tranquility training, improvements were observed, including:

Athletes appear calmer and more focused when shooting.

Reduced hasty body movements, with more control in every movement. The ability to control emotions and maintain concentration even in stressful situations.

Analysis: These changes indicate that the calmness training program, such as visualization and breathing exercises, had a positive impact on improving the mental stability of athletes, which contributed to their performance in archery.

Comparison with Control Group

There was minimal to no change in shooting accuracy and anxiety levels in the control group, which did not get the relaxing instruction. The control group's anxiety levels remained relatively unchanged, and their shot accuracy improved by an average of just 5%.

Analysis: The noteworthy distinction between the experimental and control groups supports the idea that calmness training significantly enhances athlete performance, particularly in disciplines like archery that call for mental stability and focus.

Qualitative Analysis

The majority of athletes said that tranquility training made them feel more psychologically prepared for competition, according to interviews with a number of athletes and coaches. Among the conclusions drawn from the interviews were:

Athletes feel more confident in facing the pressure of competition.

Many athletes feel better able to remain calm in critical situations, such as when taking the final, decisive shot.

Calmness training helps athletes to focus more on the process and worry less about the outcome of the game.

Analysis: The interview's findings corroborate the notion that calmness training significantly affects athletes' mental preparedness for competition in addition to improving their physical attributes.

Statistical Test

The difference between the pre-test and post-test results for the variables of shooting accuracy and athlete anxiety levels was statistically significant ($p < 0.05$), according to analysis utilizing the Paired Sample T-test. This suggests that archery players' performance is significantly improved by the tranquility training program.

4. DISCUSSIONS

The findings of the study on the impact of calmness training on the performance of

archery athletes practicing for the Malang Regency Provincial Sports Week (PORPROV) will be examined in greater detail in this discussion. This study's primary goal is to comprehend how tranquility training—which includes breathing exercises, meditation, and visualization—can help players better control stress, focus, and perform better in archery contests.

Increased Shooting Accuracy

After receiving tranquility training, the archers' shooting accuracy significantly increased, which was one of the study's most notable findings. Prior to the training regimen, the competitors' average shot accuracy was about 60%. Following four weeks of serenity training, the athletes' shot accuracy rose to 82%.

This improvement can be attributed to advancements in athletes' stress and anxiety management. Every shot in archery, as is well known, calls for intense focus and mental fortitude. Excessive tension or anxiety can impair concentration and result in uncontrollable bodily movements, which eventually reduce shooting accuracy. Deep breathing techniques and meditation are examples of calmness exercises that assist athletes focus more on the shooting process and lower their anxiety levels, which has been demonstrated to increase accuracy (Penjakora et al., 2021).

Anxiety and Stress Reduction

After completing the serenity training program, players' anxiety levels significantly decreased, according to the results of the Sport Anxiety Scale-2, an anxiety and stress questionnaire. Athletes' average anxiety score was about 60% prior to training and dropped to 40% following training. This demonstrates how serenity training might help athletes feel less anxious both before and during competition.

An athlete's performance is frequently hampered by high anxiety, particularly in sports like archery that call for a high level of focus. An elevated heart rate, erratic breathing, and tense muscles are all symptoms of anxiety that may impair a shot's accuracy. Athletes who experience less anxiety are more equipped to sustain their mental and physical stability during practice and competition, which eventually improves their performance (Pranata, 2023).

Improved Focus and Concentration

Observations of players' behavior throughout training sessions and competition simulations revealed notable gains in attention and concentration in addition to increased shooting accuracy and decreased nervousness. Many athletes exhibit symptoms of inattention prior to composure training, including impatience, restlessness, and an inability to maintain composure under pressure. Athletes that participated in a sobriety training program seemed to be more goal-oriented and had improved emotional regulation, even under pressure (Bsa et al., 2019).

The calmness training program's visualization and mindfulness meditation activities help athletes visualize successful shots and lessen mental distractions that occur during play. They can handle tough situations with confidence and composure because to this. These methods are particularly helpful while archery, as accuracy in shots requires composure and focus (Juniarni Hardi, 2022).

Comparison with Control Group

There were minimal to no discernible increases in shooting accuracy and anxiety levels

in the control group, which did not receive calming training. This supports the conclusion that training for serenity does significantly enhance the performance of archery athletes. Compared to athletes who received calmness training, athletes who did not tended to continue struggling with stress management and concentration during their shots, which led to their poorer performance. Interviews with coaches and athletes revealed that following the tranquility training program, the majority of athletes felt better prepared and self-assured. A number of athletes stated that they felt more equipped to maintain composure and concentration under pressure from competition. According to earlier research, athletes can enhance their self-control and emotional composure in high-stress competitive scenarios by practicing techniques like breathing and visualization (Susanto et al., 2024).

Coaches also noted that athletes who engaged in calmness training were more adept at focusing and exhibiting composure during training sessions that mimicked competitive scenarios. These modifications show that tranquility training affects athletes' mental preparedness in addition to their physical performance.

Practical Implications

The study's findings have significant ramifications for archery athletes' training, particularly as they get ready for prominent events like PORPROV. Archery athletes should incorporate a relaxing training regimen that incorporates breathing exercises, meditation, and visualization into their regular training regimen. Athletes will benefit from being more psychologically ready and able to handle increased pressure from competition.

Coaches of archery also need to be aware of how crucial mental preparation is for athletes. Athletes can enhance their focus and shooting accuracy as well as the emotional stability that is crucial for achieving peak performance during competition by practicing mental stillness (Ardiyanto et al., 2021).

5. CONCLUSIONS

This discussion leads to the conclusion that archery competitors' performance in the Malang Regency PORPROV tournament is significantly improved by tranquility training. Calmness training, which incorporates breathing exercises, meditation, and visualization, has been shown to help athletes focus and concentrate better, shoot more accurately, and experience less anxiety. In order to prepare archery athletes for more difficult tournaments and improve their chances of success, calmness training ought to be a crucial component of their training regimen. The performance of archery competitors who are ready for the Malang Regency PORPROV tournament is significantly improved by tranquility training. All things considered, tranquility training—which include breathing exercises, meditation, and visualization—has been shown to be successful in lowering anxiety, boosting concentration, and enhancing athletes' shot accuracy.

Better Performance: The calmness training program significantly increased the shooting accuracy of athletes, who went from an average of 60% in the pre-test to 82% in the post-test. This increase implies that mental serenity is a key factor in helping archery players develop their technical skills. **Decreased Anxiety:** The athletes' anxiety scores on the questionnaire decreased from 60% to 40%, indicating that the calmness training program was also beneficial in lowering their anxiety levels. This implies that athletes who practice calmness training are better able to control their stress and anxiety, which can affect their ability to concentrate and focus during

games. Enhanced Concentration and Focus: Direct observations revealed that calmness training helped athletes not only increase their shooting accuracy but also better focus and remain composed in competitive settings. It has been demonstrated that this skill lessens the mental diversion that frequently happens when athletes are under pressure. The conclusion that calmness training directly improves athlete performance is supported by the fact that the control group, which did not participate in the program, did not exhibit any appreciable increases in performance.

In light of these results, it is recommended that the training regimen for archery athletes in Malang Regency include calmness training, particularly while they are getting ready for events like PORPROV. It is believed that by including tranquility training, athletes will be better equipped both physically and psychologically to compete at a high level and perform at their peak.

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