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The Effects of Self-Efficacy by Talk Skill Training in Basketball Shooting Free Throw

Chang Xin and Phichayavee Panurushthanon
Srinakharinwirot University, Thailand
E-mail: 695117323@qq.com, ORCID ID: https://orcid.org/0009-0002-0232-4175
Corresponding author e-mail: nantanak@g.swu.ac.th, ORCID ID: https://orcid.org/0009-0008-4072-7091
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Abstract

Background and Aim: Self-efficacy refers to the individual's ability to judge, believe, or the subject's self-grasp and feeling of whether he or she can complete a certain activity at a certain level. In basketball, the belief that a player believes that a player can successfully make a 3-point shot in the game is a sign of self-efficacy. With the further improvement of competitive skills in China, sports psychology, self-confidence, self-efficacy, and speech have become competitive sports that cannot be ignored. The increasing focus is on the need for emotional management and psychological control. This study aims to evaluate the effectiveness of verbal training in improving basketball penalty self-efficacy and reducing anxiety.

Materials and Methods: In this study, male basketball players in grade 2022 from Jiuquan Vocational and Technical College were selected as study samples and divided into experimental and control groups by SPSS (T-Test, one-way analysis of variance). The experimental and control groups were played as individual shooters twice a week for 8 weeks. To ensure the authenticity, reliability, and integrity of the data, the data in this study were statistically analyzed by the SPSS (T-Test, one-way analysis of variance) method to determine the differences.

Results: This study shows that athletes trained in talking skills can effectively relieve physical and mental anxiety, and athletes who practice talking skills are more confident. There was no significant difference in penalty technique before training ($p > 0.05$), but after training ($p < 0.05$). Self-speaking skill training can significantly improve athletes' confidence and reduce anxiety, thus improving their ability to shoot during the game.

Conclusion: The results show that by practicing effective self-talk skills, basketball players can significantly improve their confidence and reduce anxiety during the penalty process, thus improving the penalty performance. This finding provides a new practical approach to sports psychology and suggests that coaches and athletes should incorporate self-speaking skills in their daily training to improve competition performance.

Keywords: Self-talk; Self-efficacy; Basketball Shooting Free Throw

Introduction

At the same time, the basketball throw, throws, passing, dribbling and other professional technology behavior research is deeper, and requires the unity of basketball intelligence and competitive psychology, with the further improvement of sports skills in our country, sports psychology, self-confidence, self-efficacy, talk has become an important part of psychological training in competitive sports, more and more people pay attention to the necessity of emotional management and psychological regulation.

In addition to self-efficacy, talking to yourself can motivate players in games. For example, when a player is tired or falls behind, they may say, "Come on, I can persist," or "We can get back here. "This positive self-dialogue can motivate the players and continue to play at a high level during the game. Players can also guide their technical movements by talking to themselves. For example, on a free throw, a player may mentally say, "Bend your knees, keep your arms straight, and keep a steady rhythm. "This self-guidance can help them better recall and perform the correct technical moves, improving their free throw percentage.

The purpose of this study was to investigate the effect of self-speaking skills training in male basketball players on self-efficacy and performance in basketball free-throw shooting. Basketball training students 'sports and cultural literacy, not only requires students to perceive and understand sports, but also requires students to have different abilities and levels to participate in sports practice, which is of great significance to cultivating students' lifelong sports awareness.

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Objectives

This study aims to test a hypothesis, selecting male basketball players of grade 2022 from Jiuquan Vocational and Technical College as a study sample in the experimental group and control group, and through pre-and post-intervention assessments, concluded that self-dialogue training will significantly increase the degree of confidence and reduce anxiety of basketball players.

Literature review

Sports psychology is one of the youngest sub-disciplines of psychology and is at the intersection of sport and psychology. It aims to study to give theoretical and methodological support to psychological interventions. According to Zhu (2012), the study of sports psychology in a narrow sense focuses on the theory and application of competitive sport psychology centered on high-level athletes, to improve athletes' athletic ability and enable them to reach their optimal performance level. According to Hong (2014), sports psychology is a discipline that studies the laws of occurrence and development of human psychological activities during sports. Sport psychology in a narrow sense mainly refers to the psychology of competitive sports, while sport psychology in a broader sense includes the psychology of competitive sports, the psychology of physical education, and the psychology of exercise, which is aimed at the study of the psychological problems of the people involved in these fields.

Zhang (2020) investigated 752 college students in "The Psychological Mechanism of physical exercise to improve physical self-concept", and found that physical exercise can improve self-efficacy, reduce social anxiety, narrow the difference between the ideal and real physical selves, and then promote the improvement of physical self-concept, which to a certain extent reveals that physical exercise can improve physical self-concept, which to a certain extent reveals that physical exercise can improve physical self-concept. The results revealed the psychological mechanism of physical exercise to improve body self-concept. Taking into account the above definitions of the concept of sport psychology by experts and scholars, the present study concludes that "sport psychology" is a discipline that researches the occurrence and development of human psychological activities in the process of sports.

The concept of self-efficacy was first proposed by the American psychologist Bandura in 1977 in his research on social learning theory. Since its introduction, this concept has been receiving extensive attention in the fields of education, psychology, and sociology. According to Chen (2010), in the field of sports, this belief is strong; athletes will be rich in self-confidence and believe that they can cope with the pressure, and vice versa, they will feel anxious, depressed, and lose confidence in themselves. Research has shown that self-efficacy has an impact on sports performance, i.e., self-efficacy predicts athletes' sports performance, and self-efficacy contributes to athletes' sports performance when they have a higher level of mental toughness (Chen, 2001).

Self-talk is a verbal or sensory cueing training method that can elicit a variety of psychological as well as behavioral responses, and some psychologists feel that cueing is a poor critical access to the role of understanding. Direct talk can cause conceptual thinking, and sustained and repeated cueing can bring about psychological and physiological changes, leading to functional changes between a person's systems that can be directed towards the beneficial as well as the unfavorable (Wang, 2019). Fan and Xu (2019 applied self-talk training to women's basketball training to study the role and influence of self-talk training on self-confidence, and the results of the study showed that self-talk training can promote the enhancement and improvement of self-efficacy of female athletes, and stimulate positive sports emotions and sports motivation. In conclusion, it can be found that self-confidence and self-talk during free throw shooting have a great influence on the free throw shooting rate, which shows that the more self-confidence when shooting free throws, the higher the free throw shooting rate, in addition, self-efficacy in the game will be able to greatly improve the athletes' self-confidence in shooting free throws, which will further improve the free throw shooting rate.

Self-efficacy in sports is a subjective judgment that relates to but does not necessarily match ability. The source of self-efficacy is not only the ability but also mixed with the athlete's indirect experience,

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emotional feelings, etc. These factors lead to the fact that athletes may overestimate or underestimate their ability, and produce sports self-efficacy that does not match the actual situation. Sports self-efficacy is gradually developed by athletes in practice, and it can influence athletes' sports performance, sports experience attitudes, etc. (Feltz & Lirgg, 2001).

In the field of sports, self-efficacy has been categorized by some researchers into two dimensions: competition efficacy and training efficacy. In the study, it was shown that there was a significant positive correlation between competition efficacy, training efficacy, solution coping, and emotional coping, and training efficacy was significantly positively correlated with avoidance coping, and sport self-efficacy not only has a direct effect on cognitive trait anxiety but also has an effect on cognitive-to-trait anxiety through the way of coping, i.e., athletes can choose the way of coping to regulate the level of cognitive-trait anxiety (Chen . 2010). Taking an overview of the above literature, although there are fewer studies on the relationship between self-efficacy and stress-coping styles in the field of sports at this stage, it can be found that self-efficacy and stress-coping styles have a high degree of linkage through the relevant studies in other fields.

Conceptual Framework

The purpose of this conceptual framework is to provide a rationale for understanding the impact of verbal skills training on basketball penalty self-efficacy and performance.

A free throw is a shot during a basketball game when a player is fouled by the player on the free throw line (about 4.6 meters from the basket). For example, if a player jumps to shoot a shot, a defender plays a foul, and the ball is not hit, the offensive player will get a free throw. Outside the three-point line, you usually get three free throws in the two-point area.

The importance of the penalty is mainly reflected in the following three aspects, one is one of the most stable scoring methods in basketball games; the other is relatively slow, in the case of the game rhythm, the penalty can give the team a chance to adjust the tactics; third, the performance of the penalty may directly determine the outcome of the game.

Self-efficacy is a concept proposed by American psychologist Albert Dura (Albert Bandura. It refers to the individual's speculation and judgment on whether they can complete a certain behavior. For example, a student who thinks he can get good grades on a math test has a sense of self-efficacy. This ability judgment is not only based on the skills that the individual has but also on the individual's confidence in using these skills to achieve their goals in a specific situation. For basketball players, self-efficacy in shooting is the level of confidence that they can shoot successfully. This confidence is not blindly optimistic but based on the athletes of their technical level, physical conditions, competition environment, and other factors.

Whiloequizing refers to the speech activity in which an individual speaks mainly to himself without a communication object, or even if there is a communication object. It can be sound, or silent (silent talk in the heart). For example, when a person silently says to himself in his heart, "I want to refuel, I can certainly complete this task", this is a silent soliloquy. In the basketball shooting situation, the player can be divided into positive words. Positive words to himself, such as "I can hit this ball" and "I feel good".

For example, Michael Jordan is widely regarded as one of the greatest players in basketball history. He also suffered setbacks at the beginning of his career. Jordan also strengthens his self-efficacy in daily training, setting high goals for himself. Every time he achieves these goals, his self-efficacy is further enhanced, and that confidence extends to the game, allowing him to consistently shoot skills in all complex situations of the game. Lin has had many times in the NBA, including being relegated to the D-League and being cut from the team, but he has always encouraged himself with positive words. Although Su Bingtian is not a basketball player, as a successful athlete, he also has good examples of improving self-efficacy and using soliloquy. In track and field sprints, he often faced great pressure and competition. Su will motivate himself before and during the competition. He would say to himself, "I can run faster". Su beat the men's 100 m semifinal, breaking the Asian record in 9.83 seconds to advance to the final. In such an intense competition, he strengthens his confidence, overcomes his nervousness, and plays to his best. This kind of

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psychological regulation plays a very important role for athletes to perform at their technical level at critical moments, and also provides a good reference for other athletes.

Methodology

1. Sample experiment

This study selected Jiuquan Vocational and Technical College's 2022 grade men's basketball players, 78 students, through the coach's trial, and selected 40 athletes with better overall ability. 40 students for free throws, 10 free throws per person, recorded the number of times each person hit the free throws for the 1-40 ranking. According to the order of ranking, a thousand 20 students were selected as a sample. The selected 30 students were divided into experimental and control groups, with odd numbers ranked 1, 3, 5, etc. as the experimental group and even numbers ranked 2, 4, 6, etc. as the control group, with 15 students in each group. The whole class was divided into 15 in the experimental group and 15 in the control group. Before the experiment, the subjects were questioned and investigated, and there were no injuries, illnesses, or other factors affecting the experiment.

2. Experimental Methods

This study used a quasi-experimental design, the independent variable was the Effect of self-talk training, the dependent variable was Anxiety and self-confidence in Basketball shooting, and the research design divided the sample into experimental and control groups. In order to ensure the authenticity, reliability, and completeness of the data, the data in this study were statistically analyzed using SPSS (T-Test, One-way ANOVA).

The experimental group is the players in the basketball training class for the free throw test, in the form of an individual shooting competition, requiring the players to say a word of encouragement to themselves before each shot, each person shoots 10 times, a shot scores 1 point, a full score of 10 points. Up to 8 weeks, twice a week; the control group is players in the basketball training class in the free throw test, in the form of individual shooting competition, requiring players to shoot without psychological suggestion to themselves before each shot, each person shoots 10 times, a shot scores 1 point, full score of 10 points. The two groups compared post-test results of the effect of self-talk training on anxiety and confidence in basketball shooting. It was conducted twice a week for up to 8 weeks. The scores obtained in the test were obtained and statistically analyzed by using SPSS (T-Test, One-way ANOVA) to find out the differences.

Results

The purpose of the study is to examine and compare the effects of self-talk training on basketball free-ball self-efficacy. This study included 30 basketball players from the School of Sports and Health, Jiuquan Vocational and Technical College, China. The samples were divided into 2 groups according to the order of high and low scores; that is, the control group received the training according to the normal training plan, and the experimental group received the training according to the normal training plan and the training plan. The results of confidence, anxiety, and basketball free-throw tests before, after, and after 8 weeks of training were analyzed by the SPSS statistical procedure. The results of this study indicate that verbal training significantly increased basketball player confidence and reduced anxiety, thus improving penalty performance 1. Mean and Standard deviation of age, self-confidence, and anxiety of the control and experimental groups.

The specific analysis is provided as follows:

1. Mean and standard deviation of age, confidence, and anxiety in the control and experimental groups.

2. Test the differences between the control and experimental groups before training, after the 4 weeks of training, and after the 8 weeks of training using the t-test (Independent for t-test) to test the statistical significance at the .05 level.

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3. Test the differences within the groups before training, after the 4 weeks of training, and after the 8 weeks of training of the control and experimental groups using the Paired t-test at the statistical significance level of .05.

Table 1 Comparison of situational anxiety within the control group before training, after training at week 4, and week 8 (n = 15)

Comparison within the control group	$\bar{X}$	SD	t	*p*
Somatic Anxiety Before training	13.13	3.46	-.68	.50
After training week 4	13.93	3.10		
Before training	13.13	3.46	7.37	.00*
After training week 8	9.26	2.37		
After training week 4	13.93	3.10	4.56	.00*
After training week 8	9.26	2.37		
Cognitive Anxiety Before training	10.66	1.67	-1.341	.20
After training week 4	11.53	1.95		
Before training	10.66	1.67	2.33	.03*
After training week 8	9.26	3.26		
After training week 4	11.53	1.95	2.29	.03*
After training week 8	9.26	3.26		
Self-Confidence Before Training	11.33	1.67	-1.811	.09
After training week 4	12.80	2.24		
Before training	11.33	1.67	-8.26	.00*
After training week 8	16.06	1.48		
After training week 4	12.80	2.24	-4.16	.00*
After training week 8	16.06	1.48		

* Statistical significance at .05

Table 1 shows the comparison of situational anxiety within the control group before training, after the 4-week training, and after the 8-week training. It was found that

1. Somatic Anxiety There was no statistical difference between before and after training in the 4-week (t = -.68, p >.05) but there was a statistically significant difference between before and after training in the 8-week (t = 7.37, p <.05) at .05. There was also a statistically significant difference between after training in the 4 week and after training in the 8 week (t = 4.56, p <.05) at .05.

2. Cognitive Anxiety There was no statistical difference between before and after training in the 4-week (t = -1.34, p >.05) but there was a statistically significant difference between before and after training in the 8-week (t = 2.33, p <.05) at .05. There was also a statistically significant difference between after training in the 4 weeks and after training in the 8th week (t = 2.29, p <.05) at .05.

3. Self-confidence Between before and after training in the 4 weeks, no differences were found with statistical significance (t = -1.81, p >.05), and between before and after training in the 8 weeks, there were differences with statistical significance (t = -3.50, p <.05) at .05. Also, between after training in the 4 weeks and after training in the 8 weeks, there were differences with statistical significance (t = -416, p <.05) at .05.

Table 2 Comparison of situational anxiety within the experimental groups before training, after the 4 *weeks*, and the 8 *weeks* of training.

Comparison within experimental groups	$\bar{X}$	SD	t	*p*
Somatic Anxiety Before training	13.13	2.66	1.90	.07
After training week 4	11.60	2.02		
Before training	13.13	2.66	3.95	.00*

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Comparison within experimental groups	$\bar{X}$	SD	t	*p*
After training week 8	10.46	2.13		
After training week 4	11.60	2.02	2.60	.02*
After training week 8	10.46	2.13		
Cognitive Anxiety Before training	12.40	2.72	1.37	.19
After training week 4	11.20	2.65		
Before training	12.40	2.72	2.57	.02*
After training week 8	9.46	3.50		
After training week 4	11.20	2.65	1.32	.20
After training week 8	9.46	3.50		
Self-Confidence Before Training	14.46	2.44	-1.99	.06
After training week 4	16.33	1.91		
Before training	14.46	2.44	-6.57	.00*
After training week 8	18.13	1.84		
After training week 4	16.33	1.91	-2.80	.01*
After training week 8	18.13	1.84		

* Statistical significance at .05

Table 2 shows the comparison of situational anxiety within the experimental groups before training, after the 4-week training, and after the 8-week training. It was found that

1. Somatic Anxiety There was no statistical difference between before and after training in the 4 weeks ($t = 1.90$, $p > .05$) but there was a statistical difference between before and after training in the 8-week ($t = 3.95$, $p < .05$) at a statistical significance of .05 There was also a statistical difference between after training in the 4 weeks and after training in the 8 weeks ($t = 2.60$, $p < .05$) at a statistical significance of .05

2. Cognitive Anxiety There was no statistical difference between before and after training in the 4 weeks ($t = 1.37$, $p > .05$) but there was a statistical difference between before and after training in the 8th week ($t = 2.57$, $p < .05$) at a statistical significance of .05. However, there was no statistical difference between after training in the 4 weeks and after training in the 8 weeks ($t = 1.32$, $p > .05$).

3. Self-confidence Between before and after training in the 4 week, no statistically significant difference was found ($t = -1.99$, $p > .05$). However, between before and after training in the 8t week, there was a statistically significant difference ($t = -6.57$, $p < .05$) at .05. Also, between after training in the 4 week and after training in the 8 week, there was a statistically significant difference ($t = -2.80$, $p < .05$) at .05.

Table 3 Comparison of situational self-confidence between the control and experimental groups before training, after the 4 weeks of training, and after the 8 weeks of training.

Comparison of self-confidence	Control group		Experimental group		t	*p*
	$\bar{X}$	SD	$\bar{X}$	SD		
Before training	11.33	1.67	14.46	2.44	4.09	.00*
After training week 4	12.80	2.24	16.33	1.91	4.64	.00*
After training week 8	16.06	1.48	18.13	1.84	3.37	.00*

* Statistical significance at .05

4 weeks of training and 8 weeks of training. It was found that in terms of self-confidence between the control group and the experimental group before training, there was a statistically significant difference ($t = 4.09$, $p < .05$) at .05. After the 4 weeks of training, there was a statistically significant difference (t =

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4.64, p <.05) at .05. After the 8 weeks of training, there was also a statistically significant difference (t = 3.37, p <.05) at .05.

Table 4 Comparison of basketball shooting free-throw skills within the control group before training, after the 4 weeks, and the 8 weeks of training.

Comparison of skills within a control group	$\bar{X}$	SD	t	*p*
Skills Test Before training	1.46	.51	-11.06	.00*
After training week 4	3.80	.56		
Before training	1.46	.51	-17.19	.00*
After training week 8	5.73	.79		
After training week 4	3.80	.56	-10.64	.00*
After training week 8	5.73	.79		

* Statistical significance at .05

Table 4 shows the comparison of basketball shooting free-throw skills within the control group before training, after training in the 4 weeks, and the 8 weeks. It was found that the skills between before training and after training in the 4 weeks were significantly different at a statistical level of .05 (t = -11.06, p <.05) and between before training and after training in the 8 weeks were significantly different at a statistical level of .05 (t = -17.19, p <.05) and between after training in the 4 weeks and after training in the 8 weeks were significantly different at a statistical level of .05 (t = -10.64, p <.05) at a statistical level of.05.

Table 5 Comparison of basketball shooting free-throw skills within the control group before training, after the 4 weeks, and the 8 weeks of training.

Comparison of skills within a control group	$\bar{X}$	SD	t	*p*
Skills Test Before training	1.46	.51	-11.06	.00*
After training week 4	3.80	.56		
Before training	1.46	.51	-17.19	.00*
After training week 8	5.73	.79		
After training week 4	3.80	.56	-10.64	.00*
After training week 8	5.73	.79		

* Statistical significance at .05

Table 5 shows the comparison of basketball shooting free-throw skills within the control group before training, after training in the 4 weeks, and the 8 weeks. It was found that the skills between before training and after training in the 4 weeks were significantly different at a statistical level of .05 (t = -11.06, p <.05), and between before training and after training in the 8 weeks were significantly different at a statistical level of .05 (t = -17.19, p <.05) and between after training in the 4 weeks and after training in the 8 weeks were significantly different at a statistical level of .05 (t = -10.64, p <.05) at a statistical level of .05.

The results of this study suggest that by practicing effective self-talk techniques, basketball players can significantly increase self-confidence and reduce anxiety during free throw shooting, thereby improving free throw shooting performance. This finding provides a new practical approach to sports psychology and suggests that coaches and athletes should incorporate self-talk skill training into their daily training to enhance game performance.

Discussion

The results of this study indicate that verbal training significantly increased basketball player confidence and reduced anxiety, thus improving penalty performance.

1. Improve athletes' confidence

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In sports psychology, talking to yourself is considered an important skill that can help athletes build confidence and demonstrate individual skills before a competition. By repeating and organizing their thoughts, athletes are better able to prepare and influence their confidence. According to the study, basketball players trained to tell themselves were more confident on free throws. (Zhang, 2001) In the study of basketball free throw percentage, it is believed that confidence is the potential internal cause for basketball players to stimulate their physical potential, and the free throw skills and emotional state will affect the free throw percentage. (Wang, 2020) In the study of the impact of confidence training on basketball players, it is believed that soliloquy skills can improve their performance by allowing basketball players to increase confidence and reduce anxiety in high-pressure situations. When the player repeats "I know I can throw into this ball" or "I can do the thing," these words send a deterministic message to the body that makes the body feel relaxed and confident.

In this study, using an 8-week training period, it was found that athletes practicing solo-lingual skills were more confident than those who did not practice solo-lingual skills and were confident to increase further after week 8 of training, suggesting that solo-lingual practice increased confidence. This is consistent with the research hypothesis that athletes practicing intraverbal skills have significant improvements in confidence after training.

2. Reduce anxiety

In addition to increased confidence, self-talk training also had significant effects on reducing participants' anxiety levels. Research shows that athletes who have been trained to talk to themselves can reduce physical anxiety and psychological anxiety, specifically analyzed as follows:

There was no significant difference in the physical anxiety levels between the experimental and control groups one week before training. However, after the 4th week of training, the physical anxiety remained low in the data, with a significant difference compared with the control group. The group trained in self-speech skills showed significant differences in the scores for physical anxiety (somatic anxiety) and mental anxiety (cognitive anxiety) before and after week 8. Groups not involved in self-verbal skills training showed a trend toward increased physical and psychological anxiety. Physical anxiety and anxiety scores were reduced compared to the trained experimental group, but no significant difference in psychological concerns. This suggests that the experimental group trained in auto-verbal skills achieved positive results in reducing physical anxiety.

3. Improve your free-throw shooting percentage

According to (Huang, 2014) research found that training in basketball teaching has a positive practice significance, talk training can improve students 'verbal understanding ability and abstract ability, the training promotes the students' sports enthusiasm and participation, students motivate each other, further improve the basketball throws, the guidance of the basket action has positive significance.

This study of self-verbal skills exercises performed on basketball players showed multifaceted positive effects. Studies have found that talking to athletes can significantly increase confidence and help them focus and control emotions during games. In addition, the research further verified the effectiveness of self-speech in improving self-efficacy and focusing attention, especially in the application of basketball free-throw technology. Moated self-speech was shown to enhance confidence and relaxation, while guided self-speech contributed to the precise execution of technology.

In this study, an 8-week training session was compared between basketball players (experimental group) who did not (control) (control group). The study found that the athletes in the experimental group did not receive self-speech skills training before training, and the athletes who received self-speech skills training showed significant improvement in penalty skills showed significant improvement after the 4th and 8th weeks of training. This study highlights the effectiveness of self-speech skills training in the sport of basketball shooting.

Taken together, the results of this study highlight the importance of self-dialogue training in improving confidence and reducing anxiety in basketball players, suggesting that these techniques should be integrated into routine training programs to optimize performance."

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Conclusion

The main objective of this study is to evaluate the effectiveness of Jiuquan Polytechnic in improving penalty self-efficacy and reducing anxiety. Through the questionnaire and SPSS data analysis of the mental anxiety and self-confidence between the experimental group and the control group, we believed that the self-talk training significantly improved the confidence of basketball players, reduced anxiety, and thus improved the performance of free throws.

1. Physical Anxiety

When comparing the physical anxiety in the experimental and control groups, it was found that there was no significant difference in the physical anxiety levels between the experimental and control groups before training. However, after the 4 and 8 weeks of training, the physical anxiety in the experimental group was significantly lower than in the control group, indicating that the first 8 weeks of training had significant effects on relieving physical and psychological anxiety.

2. Psychological aspects

When comparing the psychological aspects of the experimental group and the control group, the study found the following: before and after training, but not statistically significant. After training week 8, the difference in mental anxiety between the experimental and control groups remained statistically insignificant. This suggests that despite some differences in mental anxiety between the two groups at different time points, these differences did not reach statistical significance levels.

3. self-confidence

When comparing the confidence of the experimental group and the control group, the study found the following: there was no significant difference in confidence between the experimental group and the control group before training. After 4 weeks of training, the confidence of the experimental group improved significantly, and the difference between the control group was statistically significant. After the eighth week of training, the difference in confidence between the experimental group and the control group was still significant, indicating that the confidence of the experimental group remained at a high level after the long training period. These results show that systematic training has a significant effect on improving confidence in basketball free throws.

4. Free basket technology

In the comparison of basketball free throw techniques between the control and experimental groups before training, at Week 4 and after Week 8 of training, There was no significant difference in the basketball free throw technique between the control and experimental groups, It shows that the two groups have similar starting points at the technical level; After the fourth week of training, Basketball penalty technique improved significantly between the control and experimental groups, Statistically significant differences were found, The experimental group has improved its basketball free-throw skills, Show the positive impact of training on the technical level; After the eighth week of training, The difference between the control and experimental groups remained significant, Indicating that after prolonged training, The experimental group continued to maintain an advantage in basketball free throw skills.

Recommendation

Based on the findings that self-talk training significantly improves confidence and reduces anxiety in basketball players, we made the following recommendations.

1. Coaches attach great importance to the role of sports psychology.

Coaches should attach great importance to the role of sports psychology when training athletes. A comprehensive training program should include specific mental skill development modules such as self-talk training, relaxation skills, and stress management strategies. First, coaches can help athletes build positive self-speech and belief systems to enhance their confidence and willpower. Secondly, it helps athletes remain calm and focused during the competition by teaching relaxation techniques and stress management strategies. Moreover, attention control and focus training can improve response speed and decision-making. Finally, the coach can also simulate the competition situation and play a psychological

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role in training the athletes' ability to cope with stress. Through the comprehensive application of these methods, the coaches can effectively cultivate the overall ability of the athletes, so that they can show a more stable and excellent performance in the competition.

2. Athletes pay attention to sports psychological skills

Athletes should pay more attention to practicing their athletic mental skills, which are crucial for their performance in competition and training. Through effective sports mental training, athletes can learn to control their thinking processes and emotions, thus demonstrating their potential and motor skills more effectively. Athletes should pay more attention to practicing their athletic mental skills, which can help them effectively control their thinking processes and emotions. Through such training, athletes can better demonstrate their potential and athletic skills. Training of motor mental skills includes, but is not limited to, self-speech management, focus practice, stress management, and emotion regulation before competition. These skills not only help keep calm and focused during competitions but also improve confidence and efficiency in executing skills. Practicing sports mental skills is not only the key to improving physical performance but also an important way to improve overall mental health and self-management ability.

In conclusion, integrating self-dialogue training into routine training programs supported by coaches and accepted by athletes can significantly increase confidence, reduce anxiety, and improve performance in basketball free throws.

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