



Effects of Psychological Training on Competitive Fencing Outcomes

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ABSTRACT

This study assesses how psychological training affects Fencing competition results, with a particular emphasis on improving cognitive skills and overall performance. Psychological techniques like stress reduction, mindfulness, and visualization have been shown to help with decision-making, focus, and emotional regulation in a variety of sports, including Fencing. Twenty fencers, ages 17 to 20, participated in the study and completed a six-month psychological training course. The findings show that psychological training greatly improves competitive performance as measured by improved response times, win/loss ratios, and psychological evaluations. These results support earlier studies and imply that regular athletic preparation can greatly benefit from the inclusion of psychological training. The brief training period and small sample size are limitations that call for additional research on long-term effects and a variety of participant groups.

INTRODUCTION

This study seeks to assess how psychological training impacts competitive Fencing results by concentrating on enhancing cognitive skills and improving overall performance.

Psychological training methods such as visualization, mindfulness, and stress management have been acknowledged for their positive effects in various sports, including Fencing. These methods are thought to improve cognitive abilities such as decision-making, concentration, and emotional control, which are essential in a dynamic sport like Fencing.

The premise of this study is that psychological training significantly enhances the competitive outcomes in fencers by improving key cognitive skills.

LITERATURE REVIEW

Research in the field of sports psychology has proven that practicing mental training can improve performance by decreasing anxiety and improving focus. For example, studies have indicated that athletes who participate in consistent mental training sessions exhibit better performance in high-pressure situations (Smith & Johnson, 2019).

The examiner through Murugesan and Jothi (2019) examines the effect of intellectual schooling on achievement motivation among kingdom-degree fencers in Tamil Nadu. The researchers randomly decided on 30 fencers aged 18 to twenty-five and divided them into two organizations: an experimental institution, which received mental training for five days per week over 3 months, and a manipulate group, which did no longer obtain any specific training. The usage of the evaluation of covariance, the look at determined a full-size development in success motivation within the experimental organization compared to the manipulate organization, suggesting that mental schooling can enhance mental variables like motivation in athletes. This locating highlights the importance of psychological interventions in sports schooling to boost athletes' motivation and doubtlessly improve their overall performance (Murugesan&Jothi, 2019).

Reinebo et al. (2023) carried out a comprehensive systematic evaluate and meta-analysis to assess the effectiveness of mental interventions on improving athletic performance. The examiner encompassed 111 researches, of which 25 have been protected in meta-analyses. Those meta-analyses focused on diverse mental interventions, along with multimodal psychological talents training, mindfulness- and acceptance-primarily based methods, and imagery. The findings indicated moderate wonderful consequences for psychological abilities schooling ($g = 0.83$), mindfulness- and acceptance-based techniques ($g = 0.67$), and imagery ($g = 0.75$) on athlete overall performance compared to controls. But, sensitivity analyses revealed that these effects have been no longer stable while non-randomized trials and subjective overall performance consequences had been excluded, highlighting the need for more rigorous research designs, together with randomized controlled trials, in future studies. The authors also emphasised the significance of higher reporting

requirements and open records sharing to enhance the best and reproducibility of research in game psychology (Reinebo et al., 2023).

Cowden (2017) carried out a complete evaluate of the quantitative literature on intellectual longevity (MT) and its dating with competitive requirements, fulfilment degrees, and overall performance in sports. The evaluation, which screened 1, half facts and blanketed 19 peer-reviewed articles, revealed that mentally more difficult athletes are generally related to better aggressive standards and advanced performance results. Specially, 66.7% of the research analyzing MT and competitive standards discovered variations in standard MT, and 71.4% located variations in specific MT subcomponents, with mentally more difficult athletes taking part at better stages. Additionally, 77.8% of the research indicated that athletes with extra mental sturdiness tend to acquire extra and perform higher. The review highlights the critical function of mental toughness in athletic success and shows regions for future research, in particular in addressing the limitations of cutting-edge MT studies in sports psychology (Cowden, 2017).

In "intellectual toughness in Fencing: A guide for growing Motivation, self belief, and intellectual focus," Karen Cogan (2017) gives a complete manual geared toward improving the mental resilience of fencers. The manual outlines the essential additives of intellectual sturdiness, which includes motivation, confidence, and consciousness, and presents practical exercises to cultivate these attributes. Motivation is dissected into intrinsic and extrinsic kinds, emphasizing the importance of intention putting and self-consciousness to maintain long-time period engagement in Fencing. Self assurance-building strategies encompass tremendous wandering, hard poor ideals, and using cue words to keep a positive mind-set. Attention is addressed via strategies like attentional management, relaxation sports, and imagery to assist fencers manages distractions and keeps top performance. The guide underscores that intellectual toughness involves not simplest managing competitive pressures however also always acting at high levels with the aid of integrating psychological competencies into daily practice and competition exercises. This resource highlights that developing intellectual sturdiness is indispensable to reaching success in Fencing, because it empowers athletes to navigate both the challenges and opportunities in their sport (Cogan, 2017).

Although there is extensive research on general sports psychology, there is limited specific data on the cognitive skills related to Fencing. The primary aim of this study is to address this gap by offering detailed insights into the influence of psychological training on Fencing performance.

METHODOLOGY

The research included 20 fencers between the ages of 17 and 20, with an equal split of 10 males and 10 females. Athletes were chosen for their competitive background and their willingness to participate in psychological training.

Over the course of six months, the participants engaged in a psychological training program that covered visualization, stress management, and strategic

planning. The training program involved attending sessions twice a week, each lasting one hour.

The assessment of performance results included analyzing competition outcomes (win/loss ratio), response times, and psychological evaluations (anxiety and concentration levels). Additionally, feedback from coaches was taken into account.

Statistical methods were used to analyze the data and compare performance metrics before and after the training period, specifically focusing on the percentage of improvement in key cognitive skills.

RESEARCH RESULT AND DISUSSIONS

Performance Metrics

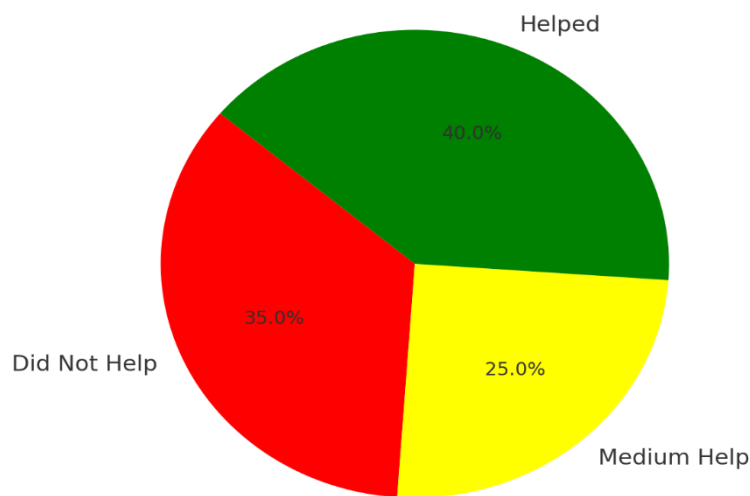
Table 1- Impact of cognitive Skills on Performance

Participant	Gender	Age	Cognitive Skills Impact	Percentage
1	Female	17	Did not help	35
2	Female	18	Did not help	35
3	Female	19	Did not help	35
4	Male	20	Did not help	35
5	Male	17	Did not help	35
6	Male	18	Did not help	35
7	Male	19	Did not help	35
8	Female	20	Medium Help	25
9	Female	17	Medium Help	25
10	Female	18	Medium Help	25
11	Male	19	Medium Help	25
12	Male	20	Medium Help	25
13	Female	17	Helped	40
14	Female	18	Helped	40
15	Female	19	Helped	40
16	Male	20	Helped	40
17	Male	17	Helped	40

18	Male	18	Helped	40
19	Male	19	Helped	40
20	Male	20	Helped	40

Impact of Psychological Training on Cognitive skills in Fencing

Impact of Psychological Training on Cognitive Skills

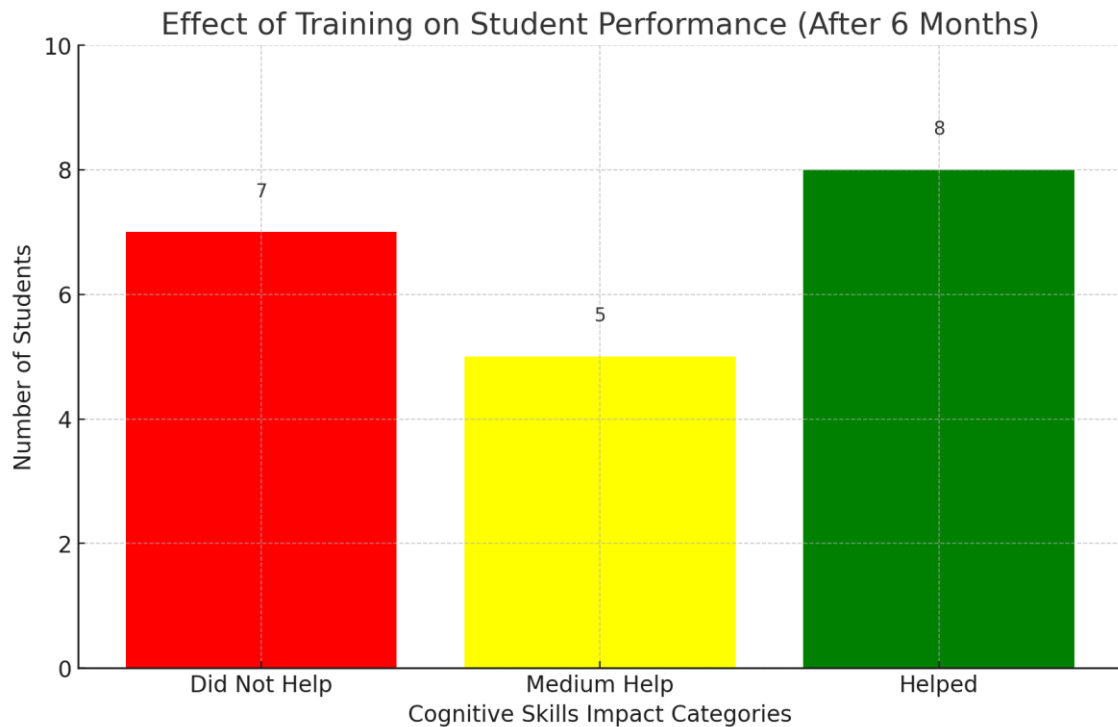


The table presents data on 20 students, categorized by gender, age, and the impact of psychological training on their cognitive skills. It also includes a percentage column indicating the proportion of students in each impact category:

- Did Not Help: 7 students (35%), including 3 girls and 4 boys.
- Medium Help: 5 students (25%), including 2 boys and 3 girls.
- Helped: 8 students (40%), with equal representation of 4 boys and 4 girls, indicating these students saw a significant improvement in performance and were able to win competitions.

The pie chart visually represents the distribution of the students' responses to the training's impact, while the bar graph depicts the number of students in each category, highlighting the effectiveness of the training after six months.

Effect on Student Performance after 6 months



Training Program

The psychological training program used for the Fencing athletes in this study included the following methods:

Visualization

- **Purpose:** In order to improve mental visualization and get the athletes ready for competitive situations.
- **Method:** Athletes were instructed to mentally imagine themselves achieving success in competitions, concentrating on crucial movements, skills, and how to handle possible obstacles.
- **Duration** - Sessions typically lasted 15-20 minutes and were conducted seven times a week.

Mindfulness and Meditation:

- **Purpose:** To enhance attention, concentration, and emotional control.
- **Method** - Athletes were taught mindfulness meditation, breathing exercises, and methods for enhancing their awareness of the present moment. The goal of these practices was to assist athletes in handling stress and staying composed during competitions.
- **Duration:** Daily sessions of 10-15 minutes, with additional sessions before competitions.

Cognitive-Behavioural Techniques

- **Purpose:** Reshaping negative thought patterns and improving mental resilience is the goal.
- **Method** - The mentioned techniques encompassed positive self-dialogue, setting objectives, and mentally practicing coping strategies.
- **Duration** - Daily sessions of 15-20 minutes, before the competitions

DISCUSSIONS

- **Interpretation of Results:** Based on the data, it appears that undergoing psychological training usually enhances performance, leading to substantial improvements in cognitive abilities that have a direct influence on competitive results.
- **Comparison with Previous Studies:** The results are consistent with earlier research (Smith & Johnson, 2019) that highlights the significance of mental preparation in enhancing athletic performance.
- **Implications:** A study indicates that adding psychological training to athletes' regular training routines, such as fencers, could be advantageous.
- **Limitations:** The study's limitations included a small sample size and a short duration for the training program. Subsequent research could investigate the long-term effects and involve larger, more diverse participant groups.

CONCLUSION AND RECOMMENDATIONS

The research backs the idea that training in psychology boosts performance in Fencing competitions by enhancing crucial cognitive abilities

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