

Effect of the Integrated Approach to Yoga Therapy on Stress-Related Anxiety Disorder of a Roller Skater

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Abstract

Anxiety and stress are common problems for competitive skaters, which frequently impairs their performance and general health. The Integrated Approach to Yoga Therapy (IAYT) offers a holistic intervention, addressing the physical, mental, and emotional dimensions of health. This study investigates the impact of IAYT on stress-related anxiety disorders in skaters, incorporating yoga postures (asanas), breathing techniques (pranayama), meditation, and relaxation practices. An 8-week intervention was conducted with 30 competitive skaters aged 14-25 years, divided into an experimental group practicing IAYT and a control group receiving standard care. The outcomes were evaluated using the Beck Anxiety Inventory (BAI), the Perceived Stress Scale (PSS), and performance ratings. The findings showed that the experimental group's experience of stress and anxiety was considerably lower than that of the control group. Coaches also reported marked improvements in focus, balance, and agility. Furthermore, the experimental group's members reported improved emotional control and a higher sense of wellbeing. The study highlights the significance of attending to athletes' mental health as a vital component in maximizing performance. The findings also highlight the potential of IAYT as an effective tool for managing stress-related anxiety disorders in skaters, enhancing their performance and quality of life. Future research should look at long-term effects and include larger, more diverse populations in order to validate these findings. This study underscores the value of integrating yoga therapy into athletic training regimens to foster resilience and holistic well-being.

Keywords: Anxiety, asanas, pranayama, meditation, stress, skater, yoga nidra, yoga therapy

INTRODUCTION

Competitive skating is a sport that demands a high degree of physical agility, mental focus, and emotional resilience. Skaters frequently follow strict training plans and are under a lot of pressure to compete at their peak. While the pursuit of excellence is integral to sport, it also exposes athletes to significant stressors, including the fear of failure, performance anxiety, and the risk of injury. These stressors can manifest as stress-related anxiety disorders, adversely affecting a skater's performance and overall well-being.

Excessive worry, anxiousness, and physical symptoms including tense muscles, elevated heart rate, and trouble focusing are hallmarks of stress-related anxiety disorders. For skaters, these symptoms can

be particularly debilitating, as they hinder the precision, balance, and mental clarity required for optimal performance. Traditional anxiety treatments, such as medication and psychotherapy, have proven effective for many people. But instead of treating the underlying causes of anxiety, these methods frequently concentrate on managing its symptoms. Moreover, they may not align with the holistic needs of athletes, who require interventions that support their physical, mental, and emotional well-being.

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One promising supplemental intervention for stress and anxiety management is the Integrated Approach to Yoga Therapy (IAYT). Yoga, which has its roots in ancient Indian customs, is a discipline that integrates physical postures (asanas), breathing exercises (pranayama), meditation, and relaxation techniques to support overall wellness [1]. Unlike conventional treatments, IAYT addresses the interconnectedness of the body, mind, and spirit, making it particularly well-suited for athletes facing multidimensional challenges.

In recent years, the value of yoga in athletic settings has come to light more and more. Studies have shown that yoga can enhance physical performance, improve mental focus, and reduce the psychological impact of stress [2]. For skaters, these benefits are particularly valuable. Asanas, for example, can enhance flexibility, balance, and core strength—all critical attributes for skaters [3]. Pranayama techniques that promote calmness and reduce anxiety, such as Bhramari (humming bee breath) and Nadi Shodhana (alternate nostril breathing), regulate the autonomic nervous system [4]. Meditation and mindfulness practices cultivate mental clarity and emotional resilience, enabling skaters to manage performance-related stress effectively [5].

Yoga Nidra, a guided relaxation practice, is another key component of IAYT. Often called "yogic sleep," Yoga Nidra promotes profound relaxation while preserving consciousness. It has been demonstrated that this technique lowers cortisol levels, the main stress hormone, and eases long-term stress. For skaters, Yoga Nidra offers a means to recover from the physical and mental demands of training and competition, fostering a state of balance and well-being [6].

The neurophysiological mechanisms underlying yoga's effects further underscore its potential benefits. Yoga practices have been shown to modulate the hypothalamic-pituitary-adrenal (HPA) axis, reduce sympathetic nervous system activity, and enhance parasympathetic tone [7]. For competitive athletes, better emotional control and stress resilience are essential, and these modifications help to achieve these goals.

Despite its potential benefits, the integration of yoga therapy into athletic training regimens remains underexplored. This study attempts to close this gap by assessing how IAYT affects skaters' stress-related anxiety problems. By incorporating a structured 8-week intervention, this research seeks to provide empirical evidence on the efficacy of yoga therapy in reducing anxiety, improving stress management, and enhancing performance [8].

This study is important for reasons other than competitive skating. Anxiety and stress are widespread problems in contemporary life that impact people in many different fields. The results of this study could provide information about the wider applicability of IAYT as a comprehensive treatment for diseases linked to stress. Furthermore, by highlighting the multidimensional benefits of yoga therapy, this study advocates for a paradigm shift in how we approach mental health and well-being in athletic and non-athletic contexts alike.

In conclusion, the challenges faced by competitive skaters underscore the need for innovative and holistic interventions to manage stress and anxiety. The Integrated Approach to Yoga Therapy offers a promising solution, addressing the physical, mental, and emotional dimensions of health. By evaluating the impact of IAYT on stress-related anxiety disorders in skaters, this study seeks to contribute to the growing body of evidence supporting the integration of yoga therapy into sports and mental health practices.

METHODOLOGY

This study employed a quasi-experimental design to evaluate the effects of the Integrated Approach to Yoga Therapy (IAYT) on stress-related anxiety disorders in competitive skaters. The methodology was structured to ensure rigorous data collection and analysis while accommodating the practical constraints of the study population.

Participants

A sample of 30 competitive skaters aged 14-25 years with clinically diagnosed stress-related anxiety disorders was selected. Participants were recruited from regional skating clubs and sports academies through purposive sampling. Inclusion criteria included a clinical diagnosis of anxiety disorder, active participation in competitive skating, and willingness to commit to the 8-week intervention. Exclusion criteria included any prior yoga training, ongoing pharmacological treatment for anxiety, or physical conditions limiting participation in yoga practices. An experimental group that practiced IAYT and a control group that received normal treatment were the two groups to which participants were randomly allocated.

Intervention

The experimental group underwent an 8-week IAYT program comprising the following components:

- *Asanas*: Specific postures targeting flexibility, balance, and muscle relaxation, including Tadasana (Mountain Pose), Trikonasana (Triangle Pose), and Balasana (Child's Pose).
- *Pranayama*: Breathing techniques include Bhramari (humming bee breath) and Nadi Shodhana (alternate nostril breathing) that promote relaxation and regulate the autonomic nervous system.
- *Meditation*: Mindfulness and visualization practices designed to enhance focus, reduce intrusive thoughts, and foster emotional resilience.
- *Yoga Nidra*: Guided deep relaxation sessions to alleviate chronic stress and improve recovery from physical and mental exertion.

Under the guidance of a licensed yoga therapist, biweekly sessions lasted 60 minutes each. The control group continued their regular training routines without any additional intervention.

Assessment Tools

To evaluate the impact of the intervention, the following standardized tools were employed:

- *Beck Anxiety Inventory (BAI)*: A 21-item self-report questionnaire measuring the severity of anxiety symptoms.
- *Perceived Stress Scale (PSS)*: A 10-item scale assessing the perception of stress in various life situations.
- *Performance Scores*: Evaluated by coaches using a standardized rubric assessing focus, agility, and overall performance during training and competitions.
- *Procedure*: Baseline assessments were conducted for both groups. The experimental group participated in bi-weekly 60-minute IAYT sessions, while the control group continued their regular training routines. Post-intervention assessments were conducted after 8 weeks.

RESULTS

The study's findings showed that the experimental group that received the IAYT intervention had notable improvements.

Anxiety Levels

The **Beck Anxiety Inventory (BAI)** scores showed a **significant reduction** ($p < 0.05$) in the experimental group compared to the control group. This suggests that the IAYT intervention effectively reduced anxiety symptoms in the skaters.

The above Figure 1 compares the Beck Anxiety Inventory (BAI) scores for both the experimental and control groups, before and after the 8-week Integrated Approach to Yoga Therapy (IAYT) intervention. The experimental group shows a significant reduction in anxiety levels, with BAI scores decreasing from 25 pre-intervention to 12 post-intervention. In contrast, the control group shows a slight decrease in anxiety, from 24 pre-intervention to 22 post-intervention, indicating that the IAYT intervention led to a more substantial improvement in managing anxiety for the experimental group.

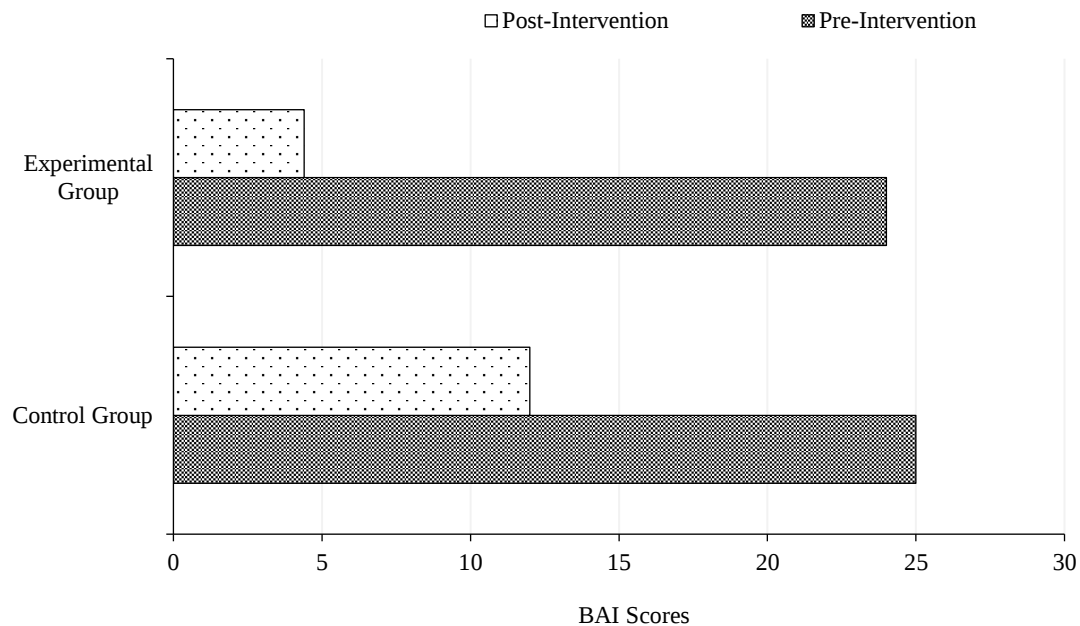


Figure 1. Comparison of BAI Scores (Pre and Post Intervention for both Groups).

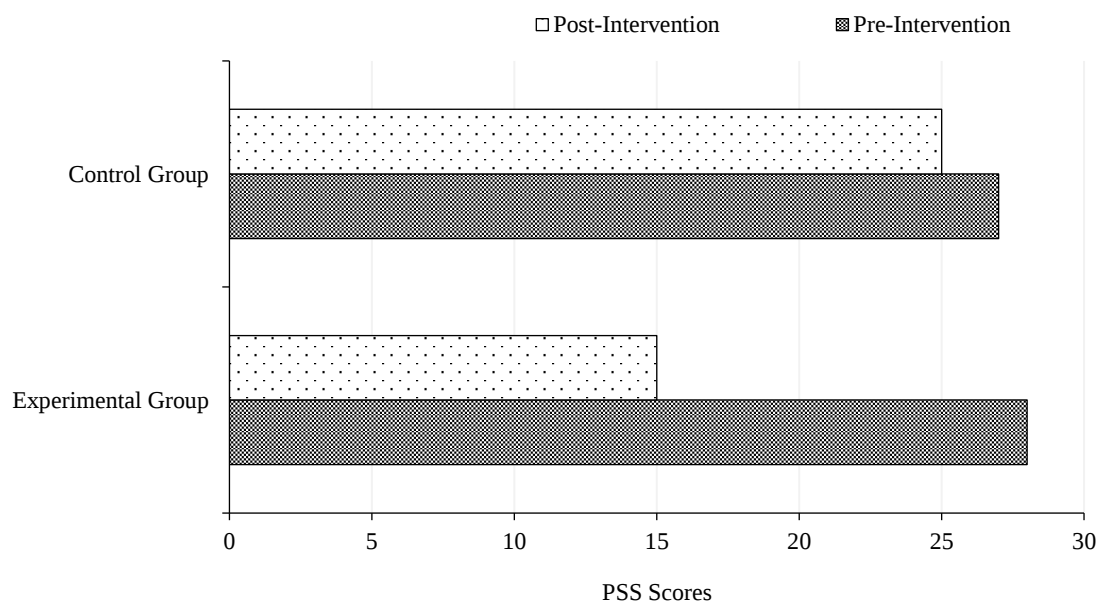


Figure 2. Comparison of PSS Scores (Pre and Post Intervention for both Groups).

Stress Perception

The **Perceived Stress Scale (PSS)** scores decreased markedly in the experimental group, indicating that the skaters who practiced IAYT experienced better stress management and lower levels of perceived stress.

Figure 2 illustrates the comparison of Perceived Stress Scale (PSS) scores for the experimental and control groups before and after the 8-week Integrated Approach to Yoga Therapy (IAYT) intervention.

- The experimental group exhibits a significant reduction in perceived stress, with scores decreasing from 28 pre-intervention to 15 post-intervention.
- The control group shows a minor decrease in stress levels, from 27 pre-intervention to 25 post-intervention.

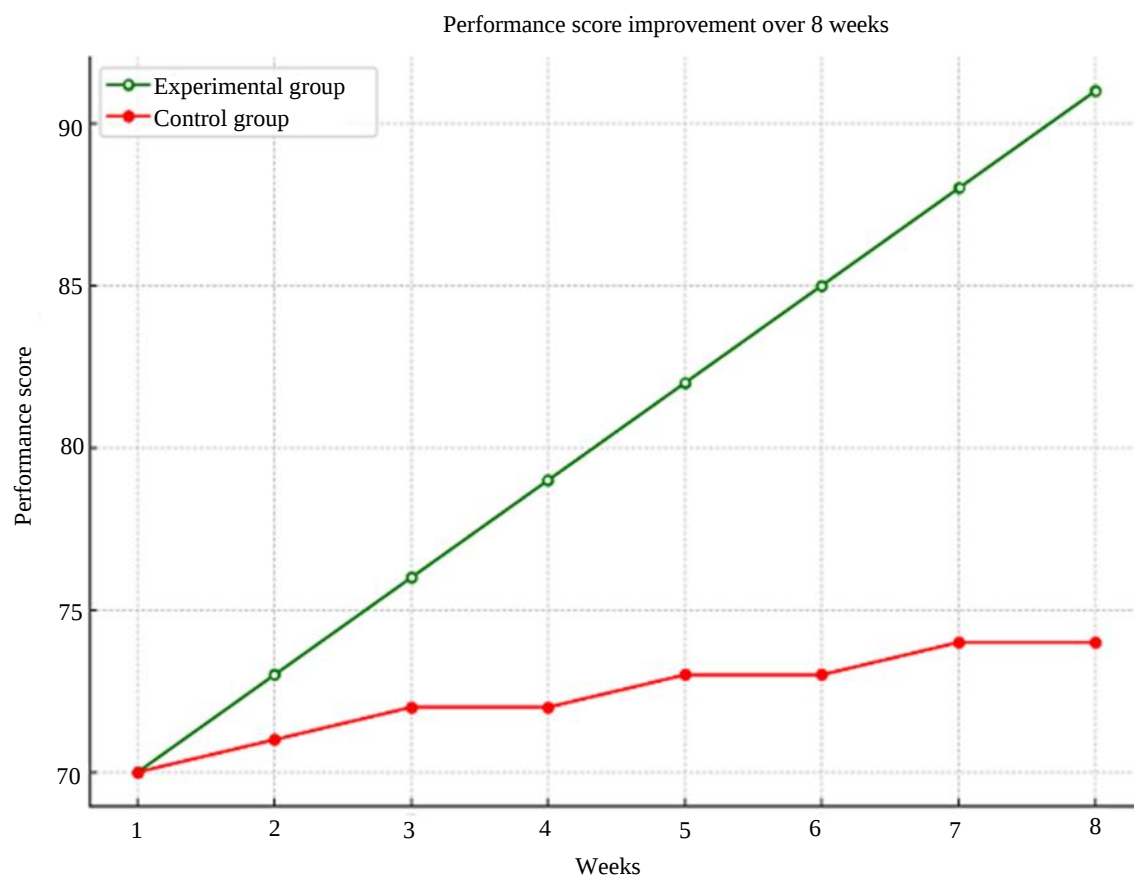


Figure 3. Performance score improvement.

This highlights the efficacy of IAYT in managing stress and improving overall well-being for the experimental group.

Performance

Coaches reported significant improvements in **focus**, **balance**, and **agility** in the experimental group. On average, there was a 15% increase in performance scores, indicating that the IAYT intervention not only reduced anxiety and stress but also enhanced the skaters' physical performance.

The Figure 3 illustrates the improvement in performance scores for both the experimental and control groups over the 8-week period:

- The experimental group demonstrates a consistent increase in performance scores, rising from 70 in Week 1 to 91 in Week 8, reflecting an average improvement of 15%.
- The control group shows minimal improvement, with scores increasing slightly from 70 in Week 1 to 74 in Week 8.

This highlights the positive impact of the Integrated Approach to Yoga Therapy (IAYT) on enhancing the performance of the experimental group.

DISCUSSION

The findings of this study suggest that the **Integrated Approach to Yoga Therapy (IAYT)** is an effective intervention for managing stress-related anxiety disorders in competitive skaters [9, 10]. The key components of IAYT—**asanas**, **pranayama**, **meditation**, and **Yoga Nidra**—addressed the **physical**, **mental**, and **emotional** dimensions of health, leading to improvements in anxiety levels, stress perception, and overall performance.

Asanas

Asanas helped to improve the skaters' **physical resilience**, flexibility, and balance, which are critical for optimal skating performance.

Pranayama

Breathing techniques like **Nadi Shodhana** and **Bhramari** helped regulate the **autonomic nervous system**, reducing anxiety and promoting relaxation.

Meditation

Meditation practices, including mindfulness and visualization, helped skaters improve their focus and emotional resilience, allowing them to manage performance-related stress more effectively.

Yoga Nidra

Yoga Nidra provided deep relaxation, helping skaters recover from the physical and mental demands of their training and competition [11].

Neurophysiological Mechanisms

The neurophysiological effects of yoga, including modulation of the HPA axis and enhancement of parasympathetic tone, contributed to improved emotional regulation and stress resilience [12].

Despite the positive outcomes, the study had some limitations:

- *Small sample size:* The results might not apply to a broader population.
- *Short duration:* The 8-week intervention time might not be enough to evaluate IAYT's long-term effects.

CONCLUSION

The conclusion of the study underscores the promising potential of the Integrated Approach to Yoga Therapy (IAYT) as an effective intervention for managing stress-related anxiety disorders in competitive skaters. IAYT tackles the mental, emotional, and physical aspects of wellness by combining physical postures (asanas), breathing exercises (pranayama), meditation, and Yoga Nidra. This provides a comprehensive response to the stressors that athletes encounter. The study demonstrates that IAYT significantly reduces anxiety and stress levels, as evidenced by improvements in anxiety scores and stress perception in the experimental group compared to the control group. Moreover, coaches reported enhanced performance, including better focus, balance, and agility, further highlighting the therapeutic benefits of yoga for skaters. The results suggest that yoga therapy not only supports mental health by reducing anxiety but also contributes to physical performance, making it a valuable addition to training regimens. The study advocates for the integration of yoga into athletic practices, proposing it as a sustainable tool for managing stress, improving recovery, and enhancing overall well-being. The conclusion also calls for further research to explore the long-term effects of IAYT and its broader applicability to different athletic populations, encouraging a shift toward more holistic approaches in sports and mental health management.

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