

Role of Yogic Interventions in Enhancing Physical Fitness and Managing Anxiety among Female Kho kho Players

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ABSTRACT

In contemporary sports, athletic performance is shaped by both physical fitness and psychological well-being, particularly among female sportspersons who often experience heightened performance anxiety and stress. This study examines the effectiveness of yoga-based interventions in improving physical fitness and reducing anxiety among adolescent Kho-Kho players. A total of 75 female athletes aged 14–18 years from schools and sports academies in Jaipur were selected using a survey method. The intervention consisted of a six-week structured yoga program incorporating asanas, pranayama, and meditation practices. The findings indicate a significant reduction in performance anxiety, with participants reporting improved emotional stability, confidence, and mental clarity during competitive situations. Additionally, notable improvements were observed in motor abilities, including flexibility, balance, coordination, reaction time, and overall physical efficiency. The integration of yoga also enhanced neuromuscular coordination and supported better stress management. The study concludes that yoga serves as a holistic and effective non-pharmacological approach to enhancing both physical and psychological aspects of athletic performance. Its regular practice fosters mind-body harmony, resilience under pressure, and overall well-being, making it a valuable component of modern sports training programs for female athletes.

Keywords: Yoga, Performance Anxiety, Physical Fitness, Female Athletes, Kho-Kho, Mental Well-being, Sports Training.

Introduction

In the modern era of competitive sports, the performance of athletes is influenced not only by physical abilities but also by psychological well-being. Female sportspersons, in particular, often face unique physiological and psychological challenges, including performance pressure, anxiety, and stress, which can significantly affect their overall performance. Physical fitness components such as strength, endurance, flexibility, and balance are essential for success in sports, but equally important is the ability to manage anxiety and maintain mental stability during training and competition.

Anxiety is one of the most common psychological factors affecting athletes. It can manifest in various forms, such as nervousness, fear of failure, and lack of confidence, ultimately leading to decreased performance levels. Therefore, there is a growing need for effective, non-pharmacological interventions that can simultaneously enhance physical fitness and promote mental well-being among female players.

In this context, yoga has emerged as a holistic and scientifically supported approach. Rooted in ancient Indian tradition, yoga integrates physical postures (asanas), breathing techniques (pranayama), and meditation to establish harmony between the body and mind. Over the years, yoga has been

increasingly incorporated into sports training programs due to its ability to improve flexibility, muscular strength, balance, coordination, and respiratory efficiency.

Research studies and practical observations have shown that yoga-based interventions significantly contribute to enhancing physical fitness parameters while also reducing anxiety levels. Practices such as Surya Namaskar, Anulom Vilom, Kapalbhathi, and mindfulness meditation help regulate the autonomic nervous system, reduce stress hormones, and improve concentration and emotional control. These benefits are particularly important for female athletes, as they support both physiological efficiency and psychological resilience.

Moreover, yoga promotes relaxation, self-awareness, and emotional stability, enabling athletes to cope better with competitive stress and performance-related anxiety. It also aids in injury prevention and faster recovery, which are critical factors in maintaining consistent performance levels.

As emphasized by Sri Aurobindo, yoga is a discipline that unites the body, mind, and spirit, fostering overall development and inner balance. This holistic nature of yoga makes it an effective tool for addressing both the physical and psychological demands of sports.

Therefore, the present study aims to examine the effectiveness of yoga-based interventions in improving physical fitness and reducing anxiety among female sportspersons. It seeks to analyze how regular yogic practices can contribute to enhancing athletic performance while promoting mental health and well-being, thereby establishing yoga as an essential component of modern sports training programs.

Yoga and Sports

In the field of sports, especially high-intensity and indigenous games such as Kho-Kho, yoga offers significant performance benefits. The game denied exceptional levels of speed, agility, reaction time, balance, muscular endurance, breath control and mental focus. Kho-Kho players require repaired directional changes, crouched running (the "pole to pole" spirit) and quick decision making. Incorporating yoga into the program helps players improve joint mobility, neuromuscular coordination, body awareness, lung capacity and stress management, all of which directly influence competitive performance.

Studies and field observations consistently show that yoga practices such as suryanamskar, dynamic stretches, pranayama techniques like Deep breathing, Anulom Viloms, kapalbhathi, and meditation practices improve overall athletic readiness. These practices reduce injury risk, enhance recovery rate and strengthen the mind-body connection, which is critical for games where reflexes and strategy play pivotal roles.

Yoga is also commonly understood as a therapy or exercise system for health and fitness; physical and mental health are natural consequences of yoga. Yoga is about harmonizing oneself with the universe. It is the technology of aligning individual gentry with the consistency to adhere to the highest level of preparation and harmony. Yoga in its traditional essence and modern training adaptations, serves as a peaceful tool to elevate the physical efficiency, psychological resilience and overall sports performance of Kho-Kho players. Integrating yoga into sport training not only enhances athletic ability but also supports long-term health and well-being, making it an essential component of contemporary sports sciences. Truth of philosophy is of an early hermetical value unless it can be lived, and we have therefore tried in the synthesis of yoga to arrive at a synthetic new understanding of the principles and methods of the various lines of spiritual, self-discipline and the way in which they can lead to an integral divine life in human existence.

Yoga has been regarded as a set of disciplined practices aimed at uniting individual consciousness with universal consciousness. The philosophical approach of yoga has emphasised personal effort, ethical living, and mental refinement as means to liberation (*moksha* or *kaivalya*). In the vast tradition of Indian philosophy, yoga has been recognised as one of the most practical and experience-based disciplines for attaining self-realisation. It has been situated historically within both orthodox (**Astika**) and heterodox (**Nāstika**) schools, such as Samkhya, Vedanta, Nyaya, Jainism, and Buddhism. Among these, the Samkhya and Yoga systems have shared particularly close ties, both conceptually and methodologically

The essential concerns of Indian philosophical systems have traditionally revolved around understanding the nature of the external world and its connection with the self. They have attempted to identify the ultimate reality (*brahman* or *purusha*) and describe the path toward spiritual emancipation. This quest has been expressed through distinctions made between the manifest and the unmanifest, the

known and the knower. Yoga has emerged as a methodology that seeks to still the modifications of the mind and thus open the path to spiritual freedom.

Importance of Yoga in Sports Training

Yoga plays an important role in sports training by enhancing both physical and mental aspects of performance. It helps athletes become more flexible and improves their range of motion, allowing movements to be smoother and more efficient. Regular practice also strengthens muscle coordination and balance, which are essential for maintaining control during complex actions. Through breathing techniques, yoga increases respiratory efficiency, helping athletes manage their energy and endurance better. On the mental side, it sharpens focus and improves decision-making, especially in high-pressure situations. Additionally, yoga aids in faster recovery and reduces the risk of injuries by relaxing the body and improving overall stability.

Effects of Psychological Variables

Psychological factors play a crucial role in sports performance, and yoga helps strengthen these aspects effectively. Practices like meditation improve concentration, enabling athletes to stay focused and make better decisions, even under pressure. Breathing techniques help in reducing stress and controlling anxiety, which is especially important during competitions. Yoga also builds confidence and emotional control, allowing athletes to remain calm, composed, and self-assured in challenging situations. Additionally, mindfulness developed through yoga enhances reaction time, helping athletes respond more quickly and effectively to their opponents' movements.

Selection of Subject

A subject of 75 girls players between age group of 14 -18 years was selected randomly through survey method from different Schools and Sports Academies of Jaipur. The samples belong to the middle socio-economic status. All samples were gathered before conducting intervention proposes explain them about testing methods and detailed discussion about their mental state or performance and their conflicts in sports performance. All subjects were agreed and cooperate in the giving yoga practices and anxiety measure scale form which was explained to them. Purpose and requirement of testing procedures of the study to make them understand about what they are actually required to do for better their performance in their respective games during the study.

Inclusion Criteria

- Age: 14-18 years
- Sex: Girls
- Sports: Kho-kho
- Place: Schools and sports academies of Jaipur city
- Level: Represented School team in Kho-Kho game.

Exclusion Criteria

- Adolescents who had a past record of performing any form of exercising or yoga practices
- Adolescents not fulfilling the indication and contraindication for specific criteria

Weekly Training Program

Weeks	Warm up	Surya Namaskar	Setubandh asana	Bhujang asana	Salbhan asana	Dhanur asana	Shawasana/Pranayama/Chant	Total Time	
1 Week	15 Minutes	10 Minutes	5 Minutes	5 Minutes	5 Minutes	5 Minutes	15 Minutes	60 Minutes	
		Sets	3Sets	6 Sets	6 Sets	4 Sets			6 Sets
		Set Time	3 min	30 Sec	30 Sec	1 min			30 Sec
		Rest	30 Sec	20 Sec	20 Sec	30 Sec			20 Sec
2 Week	15 Minutes	10 Minutes	5 Minutes	5 Minutes	5 Minutes	5 Minutes	15 Minutes	60 Minutes	
		Sets	3 Sets	6 Sets	6 Sets	4 Sets			6 Sets
		Set Time	3 min	30 Sec	30 Sec	1 Min			30 Sec
		Rest	30 Sec	20 Sec	20 Sec	30 Sec			20 Sec
3 Week	15 Minutes	10 Minutes	5 Minutes	5 Minutes	5 Minutes	5 Minutes	15 Minutes	60 Minutes	
		Sets	6 Sets	4 Sets	5 Sets	2 Sets			5 Sets
		Set Time	1 Minute	45 Sec	50 Sec	2 min			50 Sec
		Rest	30 Sec	10 Sec	10 Sec	30 Sec			10 Sec

4 Week	15 Minutes	10 Minutes	5 Minutes	5 Minutes	5 Minutes	5 Minutes	15 Minutes	60 Minutes
Sets		8 Sets	5 Sets	4 Sets	3 Sets	5 Sets		
Set Time		52 Sec	48 Sec	1 Min	2 Min	1 Min		
Rest		10 Sec	10 Sec	10 Sec	10 Sec	10 Sec		
5 Week	15 Minutes	10 Minutes	5 Minutes	5 Minutes	5 Minutes	5 Minutes	15 Minutes	60 Minutes
Sets		9 Sets	4 Sets	3 Sets	2 Sets	3 Sets		
Set Time		46 Sec	1 Min	1 min	2:15 Sec	1:15 Sec		
Rest		15 Sec	10 Sec	30 Sec	10 Sec	10 Sec		
6 Week	15 Minutes	10 Minutes	5 Minutes	5 Minutes	5 Minutes	5 Minutes	15 Minutes	60 Minutes
Sets		9 Sets	4 Sets	3 Sets	2 Sets	3 Sets		
Set Time		46 Sec	1 min	1 min	2:15 Sec	1:15 Sec		
Rest		15 Sec	10 Sec	30 Sec	10 Sec	10 Sec		

Training Program

Six Weeks program (3 Days in a week)

In 60-minute training schedule was created to provide practice for the players of kho-kho game, girls at school level over a period of six weeks, three days in a week. Before starting the training, a pre-test was conducted, which served as the pre-data. After the six weeks training a post-test was conducted, which became the post-data. T-test was applied to analyse the data.

Collection of Data

- The researcher reviewed the factors of Physical Fitness and Managing stress, which play an important role in Performance Anxiety and motor Fitness components among players at different levels to help improve their sports performance. The researcher visited schools to collect data and consulted experts in physical education and yoga. students, and the authorities were very cooperative. The researcher selected the Performance Anxiety test to measure the Motor fitness and performance anxiety of girls players from Kho-Kho.

Selection of Variables

- The researcher reviewed the factors of performance anxiety and motor fitness. These factors have an important influence on motor fitness among players at various levels to help improve their performance in their sports.
- The present study is examined and evaluated to measure the performance anxiety and motor fitness components. The study group was observed the pre-data and post-data collection.

Tools to be Used

- Performance anxiety was measured by Sports Anxiety Scale developed by Smith, R.E., et.al., (1990)
- Motor fitness test was measured by JCR test developed by B.E Philips (1957).

J.C.R Test

Phillip's J.C.R Test measures the Motor fitness of the subjects with respect to power, speed, agility and muscular endurance.

- Vertical jump (J)
- Chin up (C)
- Shuttle run (R)

Test Plan

- Pre-test:** before starting any intervention program
- Post-test:** Data was collected after six weeks of intervention program

Statistical Techniques for Analysis of Data

To analyse the results measured by the tools statistical analysis of data was done using various statistical tools like mean, standard deviation, t-test.

Conclusion

The findings of the study revealed that performance anxiety reduced after the intervention period (six weeks training) of kho-kho girls players. Participants reported greater calmness, self-confidence, and mental clarity during performance situations. Yoga helped participants gain better

emotional control and resilience under pressure. In sports performance the study showed a marked improvement in motor abilities among the experimental group. Regular yogic practice enhanced neuromuscular coordination, balance, flexibility, reaction time, and overall physical efficiency.

The study concludes that yoga has a profound and positive impact on both performance anxiety and motor ability. The regular and systematic practice of yoga helps to harmonize the body and mind, leading to enhanced psychological stability and improved physical coordination. It reduces the physiological symptoms of anxiety, enhances concentration, promotes self-confidence, and improve motor ability essential for sports performance. Yoga as a scientific, preventive, and therapeutic discipline that contributes to the enhancement of human performance potential. It may be effectively used as an integral part of training programs in sports and performing to achieve excellence and overall well-being.

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