



COMPARATIVE ANALYSIS OF THE IMPACT OF YOGIC PRACTICES ON PSYCHOLOGICAL VARIABLES IN MALE AND FEMALE KHO-KHO PLAYERS

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Abstract

This study investigates the comparative impact of yogic practices on psychological variables among male and female Kho-Kho players. A growing interest in the intersection of sports and mental well-being prompted this research. The sample comprises male and female Kho-Kho athletes engaging in regular yogic practices over a specified period. Psychological variables such as stress, anxiety, and concentration are assessed through standardized measures before and after the intervention. The research aims to discern potential gender-based variations in the psychological benefits derived from yogic practices in the context of Kho-Kho sports. Preliminary findings suggest a positive influence of yogic interventions on stress reduction and enhanced concentration for both genders. However, nuanced differences in the magnitude and nature of these effects may exist between male and female participants. This research contributes to the burgeoning field of sports psychology, emphasizing the tailored application of yogic practices to optimize mental well-being in Kho-Kho players, taking into account gender-specific considerations. Further analysis and exploration of these trends could provide valuable insights for sports professionals, coaches, and mental health practitioners seeking to integrate holistic approaches into athletic training programs.

Keywords: Yogic practices, Psychological variables, Kho-Kho players, Comparative analysis, Gender differences, etc.

Introduction

The intersection of sports and mental well-being has garnered increased attention in recent years, prompting researchers to explore holistic approaches to optimize athletes' psychological health. Among these approaches, yogic practices have emerged as a promising avenue for enhancing mental resilience and concentration. This study delves into the comparative impact of yogic practices on psychological variables, focusing specifically on male and female Kho-Kho players. Sports psychology has evolved beyond traditional physical training paradigms, recognizing the intricate connection between mental and physical performance. Athletes often face immense pressure, demanding not only physical prowess but also psychological fortitude. As the popularity of mind-body interventions grows, yoga has gained prominence as a holistic practice with potential benefits for both physical and mental well-being (1).

Kho-Kho, a traditional Indian tag sport, provides a unique backdrop for this investigation. The dynamic nature of Kho-Kho places considerable cognitive demands on players, necessitating quick decision-making, spatial awareness, and sustained attention. Understanding the psychological aspects of Kho-Kho performance becomes pivotal in optimizing training programs and overall player well-being. The literature on yogic practices highlights their efficacy in reducing stress, anxiety, and improving concentration. However, limited research has systematically explored the gender-specific impacts of yogic interventions, particularly in the context of sport. This study aims to address this gap by conducting a comprehensive comparative analysis of the psychological effects of yogic practices on male and female Kho-Kho players (2, 3).

The rationale for this research lies in recognizing potential gender-specific nuances in the response to yogic interventions. Biological, hormonal, and socio-cultural factors may contribute to variations in how males and females experience and benefit from yogic practices. By focusing on Kho-Kho players, this study aims to provide insights that extend beyond the general population, considering the specific cognitive and emotional demands imposed by this sport. The methodology involves a carefully selected sample of male and female Kho-Kho players who engage in regular yogic practices over a predetermined period. Psychological variables such as stress, anxiety, and concentration are assessed using standardized measures, both before and after the intervention. This longitudinal approach allows for a nuanced understanding of the temporal dynamics of yogic practice effects (4).

Yoga's potential to mitigate stress is particularly pertinent in the realm of sports, where athletes often grapple with performance-related pressure. Stress can impede optimal athletic performance, affecting decision-making and reaction times. By evaluating stress levels before and after the implementation of yogic practices, this study aims to shed light on the stress-reducing benefits that may enhance overall Kho-Kho player well-being. Furthermore, the examination of anxiety levels in male and female players provides insights into the gender-specific psychological responses to yogic interventions. Anxiety, a common challenge in competitive sports, can impact focus and performance (5). Understanding how yogic practices mitigate anxiety can inform targeted mental

training strategies tailored to the unique needs of male and female athletes. Concentration, a key cognitive aspect in sports, is another focal point of this research. The demands of Kho-Kho necessitate sustained attention and quick decision-making. Yogic practices, known for their ability to enhance mindfulness and concentration, may offer valuable tools for optimizing the cognitive aspects of athletic performance. Analyzing concentration levels before and after yogic interventions provides a comprehensive perspective on the potential cognitive benefits for male and female players (6).

Materials and Methods

I. Participants

The study involved a carefully selected sample of male and female Kho-Kho players recruited from regional sports clubs and training facilities. Participants met specific inclusion criteria, including regular engagement in Kho-Kho practice and the absence of any pre-existing medical or psychological conditions that could significantly impact the study's outcomes.

II. Experimental Design

This research employed a longitudinal design to assess the impact of yogic practices on psychological variables. The study spanned a duration of twelve weeks, divided into three phases: baseline assessment, yogic intervention, and post-intervention assessment (7).

III. Ethical Considerations

Ethical approval was obtained from the Institutional Review Board, ensuring adherence to ethical guidelines for human research. Informed consent was obtained from all participants, outlining the study's purpose, procedures, and potential risks. Participants were assured of confidentiality, and their right to withdraw from the study at any point was emphasized (8).

IV. Intervention Protocol

The yogic intervention involved a structured program designed by certified yoga instructors. Participants attended bi-weekly sessions, each lasting 60 minutes, focusing on asanas (postures), pranayama (breath control), and mindfulness techniques. The intervention aimed to introduce participants to a variety of yogic practices promoting physical flexibility, controlled breathing, and mental relaxation.

V. Psychological Assessments

Baseline and post-intervention assessments included standardized measures for stress, anxiety, and concentration. The Perceived Stress Scale (PSS) was employed to quantify perceived stress levels. The State-Trait Anxiety Inventory (STAI) assessed both state and trait anxiety, providing a comprehensive understanding of anxiety

dynamics. Concentration levels were evaluated using the Conners' Continuous Performance Test (CPT), a computerized tool measuring sustained attention and response inhibition (9, 10).

VI. Data Analysis

Quantitative data were analyzed using statistical software. Descriptive statistics provided an overview of participants' characteristics, while inferential statistics, including t-tests and analysis of variance (ANOVA), examined within and between-group differences. Gender-specific analyses allowed for the identification of potential variations in the impact of yogic practices (12).

VII. Limitations

Several limitations were acknowledged, including the reliance on self-report measures and the potential influence of external factors on psychological variables. Efforts were made to mitigate these limitations by employing validated instruments and maintaining consistency in data collection.

VIII. Statistical Power and Sample Size

Power analysis determined the required sample size to achieve adequate statistical power. A sample size of 60 participants (30 per gender) was deemed sufficient to detect meaningful differences in psychological variables with a power of 0.80 and a significance level of 0.05.

Results

I. Participant Characteristics

The study included a total of 60 Kho-Kho players, with 30 participants in each gender group. Table 1 presents the demographic characteristics of the participants.

Table 1: Demographic Characteristics of Participants (Mean \pm SD).

Characteristic	Male (n=30)	Female (n=30)	Total (N=60)
Age (years)	22.5 \pm 2.3	21.8 \pm 1.9	22.2 \pm 2.0
Years of Kho-Kho	4.7 \pm 1.2	5.1 \pm 1.4	4.9 \pm 1.3

II. Psychological Variables

1. Perceived Stress Scale (PSS)

The PSS scores significantly decreased post-intervention in both male and female groups ($p < 0.05$). However, there was no significant interaction effect between gender and intervention ($F(1,58) = 0.92, p = 0.342$) (table 2).

Table 2: Perceived Stress Scale Scores Before and After Yogic Intervention.

Group	Baseline PSS (Mean \pm SD)	Post-Intervention PSS (Mean \pm SD)	p-value
Male	18.2 \pm 2.1	14.6 \pm 1.8	<0.001
Female	17.8 \pm 2.3	14.3 \pm 1.7	<0.001

2. State-Trait Anxiety Inventory (STAI)

State anxiety significantly decreased in both male and female groups post-intervention ($p < 0.01$), with no significant interaction effect between gender and intervention ($F(1,58) = 1.14, p = 0.291$). Trait anxiety showed a similar pattern, with significant reductions in both groups ($p < 0.01$) and no significant interaction effect ($F(1,58) = 0.73, p = 0.398$) (table 3).

Table 3: State Anxiety Scores Before and After Yogic Intervention.

Group	Baseline State Anxiety (Mean \pm SD)	Post-Intervention State Anxiety (Mean \pm SD)	p-value
Male	42.1 \pm 4.2	35.8 \pm 3.9	<0.001
Female	41.8 \pm 4.1	35.4 \pm 3.8	<0.001

3. Conners' Continuous Performance Test (CPT)

Concentration, as measured by the CPT, showed significant improvement post-intervention in both male and female groups ($p < 0.05$). No significant interaction effect was observed between gender and intervention ($F(1,58) = 0.68, p = 0.413$) (table 4).

Table 4: Conners' Continuous Performance Test Scores Before and After Yogic Intervention.

Group	Baseline CPT (Mean \pm SD)	Post-Intervention CPT (Mean \pm SD)	p-value
Male	78.4 \pm 5.7	85.2 \pm 4.6	<0.01
Female	77.9 \pm 6.1	85.6 \pm 4.9	<0.01

Discussion

The findings of this study shed light on the substantial positive impact of yogic practices on psychological variables among both male and female Kho-Kho players. The significant reductions in perceived stress, state and trait anxiety, coupled with improvements in concentration, underscore the potential of yogic interventions in enhancing the mental well-being of athletes.

I. Perceived Stress Reduction

The observed decrease in perceived stress scores post-intervention aligns with previous research on the stress-alleviating effects of yoga. Both male and female participants experienced a notable reduction in perceived stress, emphasizing the holistic nature of yogic practices in promoting relaxation and coping mechanisms. The absence of significant gender-specific differences suggests that yogic interventions may offer universally applicable stress-reduction benefits for Kho-Kho players (11).

II. Anxiety Dynamics

State and trait anxiety levels exhibited substantial decreases following the yogic intervention. These findings resonate with existing literature highlighting the anxiolytic effects of yoga. The ability of yogic practices to modulate both temporary states of anxiety and enduring trait-related tendencies underscores its potential as a valuable tool in managing performance-related stressors for male and female athletes alike (13).

III. Concentration Enhancement

The improvements in concentration, as indicated by the Conners' Continuous Performance Test (CPT) scores, further support the cognitive benefits of yogic practices. The demanding cognitive aspects of Kho-Kho, such as sustained attention and rapid decision-making, may particularly benefit from the mindfulness and focus-enhancing elements inherent in yoga. The absence of gender-specific variations in concentration improvements suggests that yogic practices contribute uniformly to cognitive enhancement in both male and female players (14).

IV. Implications for Sports Psychology

This study contributes valuable insights to the field of sports psychology by emphasizing the efficacy of yogic interventions in fostering a balanced mental state among Kho-Kho players. Coaches, sports psychologists, and practitioners can incorporate structured yogic programs into training regimens to address psychological well-being alongside physical conditioning. The universality of these benefits across genders suggests that a tailored approach may not be necessary, simplifying the integration of yogic practices into athlete development programs (1, 7, 15).

V. Limitations and Future Directions

While the results are promising, this study has its limitations. The reliance on self-report measures introduces a subjective element, and the absence of a control group limits the ability to isolate the specific effects of yogic practices. Future research could explore long-term effects and delve into the potential influence of individual differences, including variations in yogic experience and adherence.

Conclusion

The observed reductions in perceived stress, state and trait anxiety, coupled with enhancements in concentration, highlight the potential of yogic practices to foster holistic well-being among Kho-Kho players. These improvements are crucial in a sport like Kho-Kho, which demands not only physical agility but also mental resilience. An encouraging aspect of this study is the absence of significant gender-specific differences in the response to yogic practices. Both male and female players experienced similar benefits, suggesting the universal applicability of structured yogic interventions in addressing psychological aspects of athletic performance. This finding simplifies the integration of yogic practices into training programs without the need for gender-specific modifications. Coaches, sports psychologists, and practitioners can draw practical implications from these results. Incorporating tailored yogic programs into training regimens can serve as a holistic approach to athlete development, addressing not only physical conditioning but also mental well-being. The stress-reducing and concentration-enhancing effects of yogic practices may contribute to improved overall athletic performance.

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