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# Effect of Yogic Practices on Flexibility of Adolescent Boxing Players

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**ABSTRACT:** Flexibility is a key component of physical fitness and an essential determinant of sports performance, particularly in physically demanding sports such as boxing. Adolescence is a critical developmental period during which physical abilities, including flexibility, undergo rapid changes. The present experimental study investigated the effect of selected yogic practices on the flexibility of adolescent boxing players. Thirty adolescent male boxing players aged twelve to eighteen years participated in the study. Flexibility was measured using standardized physical fitness tests before and after a structured yogic training program. Descriptive statistics and inferential statistical techniques were applied to analyze the data. The results revealed a significant improvement in flexibility following the yogic intervention. The findings confirm that yogic practices are effective in enhancing flexibility and can be integrated into sports training programs for adolescent athletes.

**KEYWORDS**: Yogic Practices, Flexibility, Adolescent Athletes and Boxing Players

## I. INTRODUCTION

Yoga is a system of physical, mental, and spiritual practices that originated in ancient India and has evolved into a widely accepted method for improving physical fitness and mental well-being. In contemporary sports science, yoga is increasingly recognized as a complementary training method that enhances physical capacities such as flexibility, balance, and neuromuscular efficiency. Flexibility is defined as the ability of a joint or group of joints to move through their full range of motion. It is an essential component of physical fitness and plays a crucial role in sports performance and injury prevention. In boxing, flexibility contributes to efficient movement, greater punching reach, defensive agility, and reduced muscular strain. Adolescent athletes, in particular, require systematic flexibility training to support healthy physical development and optimal performance.

**Background of the Study:** Flexibility is influenced by multiple factors, including muscular elasticity, joint structure, and neuromuscular control. Adequate flexibility is necessary to maintain joint health, prevent musculoskeletal injuries, and ensure efficient movement patterns. Regular flexibility training, including stretching and yogic practices, enhances the functional efficiency of muscles and joints. Yoga is considered one of the most effective methods for improving flexibility because it combines dynamic and static postures that stretch muscles and increase joint mobility. Regular practice of yoga reduces muscle stiffness, improves posture, and enhances overall physical fitness. In sports such as boxing, flexibility is particularly important because the sport involves rapid and forceful movements that place significant stress on muscles and joints. Therefore, integrating yogic practices into boxing training programs may contribute significantly to the development of flexibility and overall athletic performance.

**Objectives of the Study:** The objectives of the study were to evaluate the flexibility level of adolescent boxing players and to examine the impact of selected yogic practices on their flexibility. The study aimed to determine whether systematic yogic training could significantly enhance flexibility and contribute to improved physical performance among adolescent boxing players.

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## II. METHODOLOGY

The present investigation was conducted using an experimental research design incorporating a pre-test and post-test framework to systematically examine the effect of selected yogic practices on the flexibility of adolescent boxing players. Prior to the intervention, baseline measurements of flexibility were obtained through standardized testing procedures to establish initial performance levels. Subsequently, a structured yogic training programme was administered to the participants over a predetermined duration under controlled conditions. Upon completion of the intervention, post-test measurements were recorded using identical assessment tools to ensure consistency and reliability of data. The comparison of pre-test and post-test scores enabled the evaluation of the magnitude and significance of changes in flexibility attributable to the yogic intervention. Statistical techniques were employed to determine whether the observed differences were statistically significant, thereby providing empirical evidence regarding the effectiveness of yogic practices in enhancing flexibility among adolescent boxing players.

**Yogic Training Program:** The yogic training program consisted of selected asanas and breathing exercises designed to enhance flexibility. The program was conducted regularly over a predetermined training period under the supervision of the researcher.

**Table 1: Yogic Practices Training Schedule (Week 1–2)**

| Phase | Activities | Duration |
|---|---|---|
| **Warm-up** | Opening Prayer | 1 minute |
| | Deep Breathing | 1 minute |
| | Loosening Exercises | 4 minutes |
| **Asanas** | Tadasana, Trikonasana, Paschimottanasana, Bhujangasana, Vrikshasana, Utkatasana | 10 minutes |
| | Repetition | 30 seconds (3 sets) |
| **Pranayama** | Anulom Vilom Pranayama, Kapalbhati Pranayama, Bhramari Pranayama | 9 minutes |
| **Trataka** | Trataka Practice | 5 minutes (2 rounds) |
| **Cooling Down** | Guided Meditation | 2 minutes |
| | Shavasana | 2 minutes |
| | Closing Prayer | 1 minute |
| **Total Duration** | | **40 minutes** |

**Table 2: Yogic Practices Training Schedule (Week 3–6)**

| Phase | Activities | Duration |
|---|---|---|
| **Warm-up** | Opening Prayer | 1 minute |
| | Deep Breathing | 1 minute |
| | Loosening Exercises | 4 minutes |
| **Asanas** | Tadasana, Trikonasana, Paschimottanasana, Bhujangasana, Ardha Chakrasana, Vrikshasana, Utkatasana, Ardha Chandrasana, Halasana, Virabhadrasana (I) | 20 minutes |
| | Repetition | 30 seconds (4 sets) |
| **Pranayama** | Anulom Vilom Pranayama, Kapalbhati Pranayama, Bhramari Pranayama | 9 minutes |
| **Trataka** | Trataka Practice | 5 minutes (2 rounds) |

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| Phase | Activities | Duration |
|---|---|---|
| **Cooling Down** | Guided Meditation | 2 minutes |
| | Shavasana | 2 minutes |
| | Closing Prayer | 1 minute |
| **Total Duration** | | **50 minutes** |

**Tools and Procedure:** Flexibility was assessed using a standardized physical fitness test. Pre-test measurements were recorded before the commencement of the yogic training program, and post-test measurements were recorded after the completion of the program.

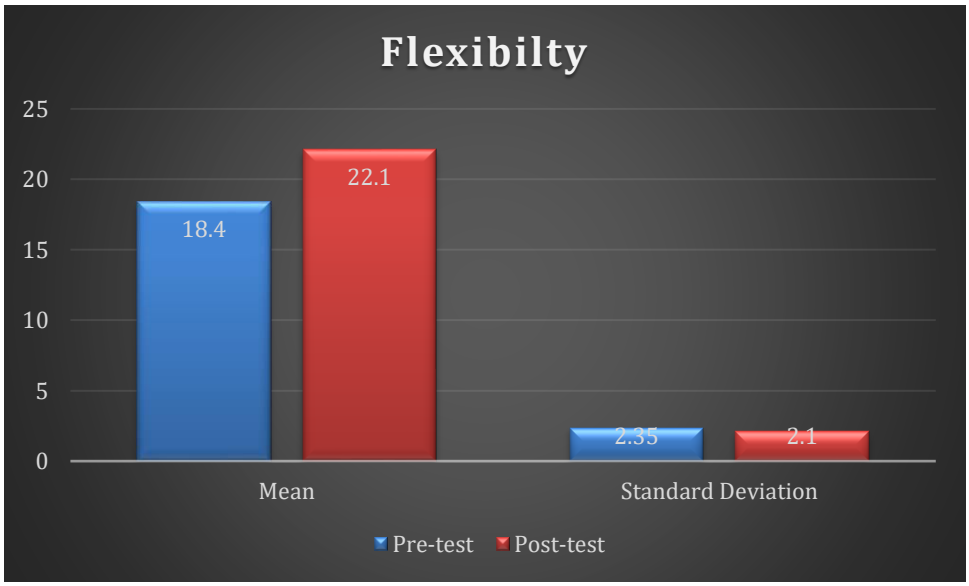
**Statistical Analysis:**
The collected data were analyzed using descriptive statistics, including mean and standard deviation. The significance of differences between pre-test and post-test scores was examined using the paired t-test. The level of significance was set at 0.05.

**Table no. 3: Descriptive Statistics of Flexibility Scores of Adolescent Boxing Players**

| Test Condition | N | Mean | Standard Deviation |
|---|---|---|---|
| Pre-test | 30 | 18.40 | 2.35 |
| Post-test | 30 | 22.10 | 2.10 |

**Table No.1:** The table presents the descriptive statistics of flexibility scores of adolescent boxing players before and after the yogic practices training programme. The pre-test mean score of flexibility was 18.40 with a standard deviation of 2.35, indicating the initial level and variability of flexibility among the participants. After the intervention, the post-test mean score increased to 22.10 with a standard deviation of 2.10. The increase in the mean score shows that flexibility improved after yogic training, while the slight decrease in standard deviation indicates more consistent performance among participants. Overall, the table demonstrates that selected yogic practices had a positive effect on the flexibility of adolescent boxing players.

**Graph no.1**




**Graph no.1:** Graphical representation of Mean and S.D of flexibility

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**Table No.4: Paired t-Test Results for Flexibility Scores**

| Variable | Mean Difference | Standard Error | t-value | Level of Significance |
|---|---|---|---|---|
| Flexibility | 3.70 | 0.45 | 8.22 | $p < 0.05$ |

**Table No. 2**: shows the results of the paired t-test conducted to examine the effect of selected yogic practices on the flexibility of adolescent boxing players. The mean difference in flexibility scores between the pre-test and post-test was 3.70, indicating a substantial improvement after the training programme. The standard error of 0.45 reflects the reliability of the mean difference estimate. The calculated t-value of 8.22 is higher than the critical value at the 0.05 level of significance, indicating that the difference between pre-test and post-test scores is statistically significant. Therefore, the results confirm that selected yogic practices had a significant effect on the flexibility of adolescent boxing players.

## III. RESULTS

The results of the study revealed a significant improvement in flexibility among adolescent boxing players following the yogic training program. The mean flexibility score increased from 18.40 in the pre-test to 22.10 in the post-test. The paired t-test analysis indicated that the observed improvement was statistically significant at the 0.05 level. These findings support the hypothesis that selected yogic practices have a significant effect on the flexibility of adolescent boxing players. The results demonstrate that yogic practices contribute to enhanced joint mobility, muscle elasticity, and overall physical efficiency.

## IV. DISCUSSION

The findings of the present study indicate that yogic practices are effective in improving flexibility among adolescent boxing players. Yoga postures systematically stretch muscles and enhance joint range of motion, leading to significant improvement in flexibility. These results are in agreement with earlier research findings. **Bharatha and Gopinath (2011)** reported a significant improvement in flexibility among schoolboys following a twelve-week yogic training programme. Similarly, **Donahoe-Fillmore et al. (2019)** found that yoga practice significantly enhanced flexibility in children aged 10–12 years. Jhadav (2022) also observed notable improvements in flexibility among college athletes after systematic yogic practice. Furthermore, **Polsgrove et al. (2016)** reported significant gains in flexibility among male collegiate athletes who participated in regular yoga training. These findings support the conceptual understanding that flexibility plays a crucial role in sports performance and injury prevention. In boxing, improved flexibility enables athletes to perform movements with greater ease, speed, and precision while reducing muscular stiffness. Moreover, enhanced flexibility reduces the risk of musculoskeletal injuries by improving the tolerance of muscles and ligaments to sudden movements and external forces. The present study, therefore, reinforces the importance of integrating yogic practices into sports training programmes, particularly during adolescence, when physical development is at a critical stage.

## V. CONCLUSION

The present study concludes that selected yogic practices have a significant effect on the flexibility of adolescent boxing players. Regular practice of yoga enhances joint mobility, muscle elasticity, and overall physical fitness. The findings of the study suggest that yoga can be effectively integrated into sports training programs to improve flexibility and reduce the risk of injuries among adolescent athletes. The study provides scientific evidence supporting the use of yogic practices as a complementary training method in boxing. It is recommended that coaches, trainers, and sports institutions incorporate yogic practices into regular training routines to promote balanced physical development and optimal athletic performance.

## REFERENCES

1. Arora, M. (2005). Cricket Coaching Manual. Sports Publication, New Delhi p.p.1-9
2. Arya, K. (2018) Yoga Education. Friends Publication, New Delhi p.p.235-241.
3. Banerjee. (2020). Yoga For Life Style Diseases. Sports Publication, New Delhi p.p1-9

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4. Best, J. W. and Kahn, J. V. (2003). Research in Education. Published by Prentice Hall of India Private limited, New Delhi-110001. p. 58
5. Bupesh, S.M, &Jose, B.P. (2014), Effect of Yogic Practice and Swiss ball Training on Flexibility Among Adolescent.
6. Debnath, K. (2017) "Yogic Science". Friend publication, New Delhi p.96.
7. Gharote, M.L. (1990). Applied Yoga Kavyalyadhama S.M.Y.M. Samiti.Lonavala. pp 31-33
8. Gulahane, A. (2017) Yoga and Diabetes. Sports Publication, New Delhi pp 1-3.
9. Gupta, N. (2006). Effect Of Yoga Based Lifestyle Intervention on State and Trait Anxiety. Indian J PhysiolPharmacolp.p41-47.
10. Mishra, S. (2020) Yogic Science. Sports Publication, New Delhi p.p.205-208.
11. Singh, A. Bains, G.J. &Singh, R.B. (2010) Essential of Physical Education, Kalayani Publishers. Ludhiana.p.537.

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