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Influence of yogasana and pranayama practices on flexibility among male school students

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Abstract
Objectives: The present study was conducted to examine the influence of Yogasana and Pranayama practices on flexibility among male school students.
Method: For this purpose, thirty male school students were selected from schools of Uttar Pradesh and randomly divided into three groups, namely Yogasana group (n = 10), Pranayama group (n = 10), and Control group (n = 10). A pre-test–posttest experimental design was employed. Flexibility was assessed using the Sit and Reach Test before and after a twelve-week training programme. The Yogasana group and Pranayama group underwent their respective training programmes for twelve weeks, while the Control group did not participate in any special training.
Results: The collected data were analysed using One-Way Analysis of Variance (ANOVA). The results revealed a significant improvement in flexibility among the Yogasana and Pranayama groups compared to the Control group.
Conclusion: It was concluded that Yogasana and Pranayama practices are effective in improving flexibility among male school students.

Keywords: Yogasana, pranayama, flexibility, school students, yoga

Introduction

Physical fitness plays a vital role in the overall development of school students. Among the various components of physical fitness, flexibility is an important factor that contributes to efficient movement, injury prevention, and maintenance of proper posture. Flexibility refers to the ability of joints and muscles to move freely through their complete range of motion.

In recent years, yogic practices such as Yogasana and Pranayama have gained wide recognition for their positive effects on physical and mental health. Yogasana involves systematic body postures that enhance muscular elasticity and joint mobility, while Pranayama focuses on controlled breathing techniques that improve oxygen supply and relaxation of muscles. Regular practice of yogic exercises has been found beneficial in improving flexibility, balance, strength, and overall physical fitness.

Despite the growing popularity of yoga, limited scientific studies have been conducted to examine and compare the effects of Yogasana and Pranayama on flexibility among school going male students. Therefore, the present study was undertaken to investigate the influence of Yogasana and Pranayama practices on flexibility among male school students.

Review of Related Literature

Several studies have reported the positive effects of yogic practices on flexibility and physical fitness. Research findings suggest that regular practice of Yogasana significantly improves flexibility by enhancing muscle length and joint mobility. Studies on Pranayama have also indicated improvements in muscular relaxation and overall physical efficiency.

Previous investigations conducted on school students have shown that yoga-based interventions are effective in improving flexibility, posture, and motor coordination. Some researchers have emphasized that yogic practices can be easily incorporated into school physical education programmes due to their simplicity and minimal requirement of equipment.

The review of literature clearly indicates that Yogasana and Pranayama have a beneficial impact on physical fitness components; however, comparative studies focusing specifically on flexibility among male school students are limited. This gap provided the basis for the present investigation.

Objectives of the Study

The present study was undertaken with the following objectives

1. To assess the level of flexibility among male school students.
2. To examine the effect of Yogasana practices on flexibility among male school students.
3. To examine the effect of Pranayama practices on flexibility among male school students.
4. To compare the effects of Yogasana, Pranayama, and Control groups on flexibility.

Hypotheses of the Study

The following null hypotheses were formulated:

1. There would be no significant difference in flexibility among male school students.
2. There would be no significant difference in the effect of Yogasana and Pranayama practices on flexibility among male school students.

Methodology Selection of Subjects

The sample for the present study consisted of thirty (30) male school students selected from schools of Uttar Pradesh. The age of the subjects ranged between 14 and 16 years.

The subjects were randomly assigned into three groups:

- **Group I:** Yogasana group (n = 10)
- **Group II:** Pranayama group (n = 10)
- **Group III:** Control group (n = 10)

Selection of Variables

- **Independent Variables**
  - Yogasana practices o Pranayama practices
- **Dependent Variable:**
  - Flexibility

Administration of Training Programme

The experimental groups underwent a 12-week yogic training programme, five days per week, one hour per session. The control group did not participate in any yogic training programme.

Criterion Measure

Flexibility was measured using the Sit and Reach Test, and the scores were recorded in centimetres.

Training Programme

The Yogasana and Pranayama groups underwent their respective training programmes for twelve weeks, five days per week, with each session lasting approximately 45 minutes. The Control group did not participate in any specific training programme and continued with their routine activities.

Experimental Design

A random group pre-test–post-test design was employed for the study.

Statistical Technique

Descriptive statistics (mean and standard deviation) were calculated. Inferential statistics using one-way ANOVA were applied to compare the mean differences among the three groups (Yoga group, Pranayama group, and Control group), with the level of significance set at 0.05.

Result of the study

Table 1: Descriptive statistics of Flexibility of three male group of School Students of Utter Pradesh.

		N	Mean	Std. Deviation	Std. Error
Pre-test	Control Group	10	13.20	.789	.249
	Yogasana Group	10	13.00	.816	.258
	Pranayama Group	10	13.00	.943	.298
Post-test	Control Group	10	13.00	.816	.258
	Yogasana Group	10	16.90	.994	.314
	Pranayama Group	10	14.60	.966	.306

(*Significant at 0.05 level)

Table–1 presents the descriptive statistics of flexibility scores of three groups of male school students, namely the Control group, Yogasana group, and Pranayama group, measured at pretest and post-test levels. At the pre-test level, the mean flexibility scores of the Control group (13.20 ± 0.79), Yogasana group (13.00 ± 0.82), and Pranayama group (13.00 ± 0.94) were nearly similar, indicating that all three groups were comparable before the commencement of the training programme.

At the post-test level, the Control group showed almost no change in flexibility with a mean score of 13.00 ± 0.82. In contrast, the Yogasana group exhibited a marked improvement in flexibility, recording a mean score of 16.90 ± 0.99, while the Pranayama group also demonstrated improvement with a mean score of 14.60 ± 0.97.

Overall, the descriptive results indicate that Yogasana and Pranayama practices led to improvement in flexibility, with the Yogasana group showing greater enhancement compared to the Pranayama and Control groups.

Table 2: ANOVA analysis Flexibility of three male group of Schools Students of Uttar Pradesh.

		Sum of Squares	Df	Mean Square	F	Sig.
Pre-test	Between Groups	.267	2	.133	.184	.016
	Within Groups	19.600	27	.726		
Post-test	Between Groups	76.867	2	38.433	44.536	.000
	Within Groups	23.300	27	.863		

(*Significant set at 0.05 level)

Table–2 presents the One-Way Analysis of Variance (ANOVA) results for flexibility scores of three groups of male school students of Uttar Pradesh at the pre-test and post-test levels.

At the pre-test stage, the ANOVA results revealed no significant difference among the Control, Yogasana, and Pranayama groups, as the obtained F-value was 0.184, indicating that the groups were statistically homogeneous before the commencement of the training programme.

At the post-test stage, a significant difference was observed among the three groups, with an obtained F-value of 44.536, which was significant at the 0.05 level of confidence ($p < 0.05$). This indicates that the twelve-week Yogasana and Pranayama intervention had a significant effect on flexibility. Overall, the ANOVA results clearly demonstrate that the experimental treatments, particularly Yogasana and Pranayama practices, significantly improved flexibility when compared to the Control group.

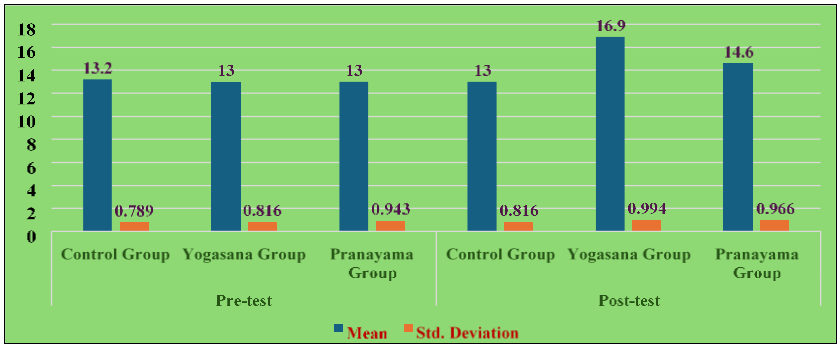

Fig 1: Graphical presentation of Flexibility of three male group of Schools students of Uttar Pradesh.

Discussion of the Result

The analysis of data revealed significant improvement in flexibility scores of the Yogasana and Pranayama groups when compared to the Control group. The Yogasana group showed greater improvement in flexibility, followed by the Pranayama group. The Control group did not show any significant improvement. The improvement in flexibility among the experimental groups may be attributed to regular stretching of muscles and joints through Yogasana practices and enhanced muscular relaxation through Pranayama techniques. These findings are in agreement with earlier studies that reported positive effects of yogic practices on flexibility and physical fitness.

Conclusion

On the basis of the findings of the present study, it was concluded that Yogasana and Pranayama practices significantly improve flexibility among male school students. Yogasana practices were found to be slightly more effective in enhancing flexibility compared to Pranayama practices. Therefore, it is recommended that yogic practices be incorporated into school physical education programmes for the overall physical development of students.

Recommendations

1. Yogasana and Pranayama practices may be included in the school curriculum.
2. Similar studies may be conducted on female students.
3. Future research may include other physical fitness variables such as strength, endurance, and balance.
4. Studies may be conducted with a larger sample size and longer training duration.

References

1. Bhutkar MV, *et al*. Effect of yogic practices on physical fitness. International Journal of Yoga, 2011.
2. Madanmohan, *et al*. Effect of yoga training on physical fitness variables. Indian Journal of Physiology and Pharmacology, 2008.
3. Telles S, *et al*. Yoga and physical fitness. Journal of Physical Education and Sport, 2013.
4. Madanmohan U. Effect of yogic practices on physical fitness variables. Indian Journal of Physiology and Pharmacology, 2008.
5. Telles S. Yoga and physical fitness: A review. International Journal of Yoga, 2013.
6. Bhutkar MV. Effect of yoga training on flexibility and muscular strength. Journal of Physical Education and Sports Sciences, 2011.
7. Khatri D, Mathur KC, Gahlot S. Effect of pranayama on body mass index and cardiovascular fitness of college students. International Journal of Physical Education, Sports and Health,2016:3(2):38-42.
8. Madanmohan U, Bhavanani AB, Dayanidy G, Sanjay Z. Effect of yoga training on cardiorespiratory performance in normal young adults. Indian Journal of Physiology and Pharmacology,2008:52(2):133-136.
9. Pal GK, Velkumary S, Madanmohan. Effect of short-term practice of breathing exercises on autonomic functions in normal human volunteers. Indian Journal of Medical Research,2011:120(2):115-121.
10. Telles S, Singh N, Balkrishna A. Managing mental health disorders resulting from trauma through yoga: A review. Depression Research and Treatment,2013:2013:1-9.