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Effect of Yogic Intervention on Competitive Anxiety, Mental Toughness, and Concentration among Archery Players: A Scilevel Study.

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ABSTRACT
The present study examined the effect of yogic intervention on selected psychological variables namely competitive anxiety, mental toughness, and concentration among archery players. The study adopted an experimental research design with pre-test and post-test measures. A total of 40 archery players were selected purposively and divided into two groups: experimental group (n=20) and control group (n=20). The experimental group underwent an eight-week yogic intervention program including Asanas, Pranayama, Meditation, and Relaxation techniques, while the control group continued their regular sports training only. Standardized psychological scales were administered before and after the intervention. Statistical analysis was carried out using mean, standard deviation, and t-test. The findings revealed significant improvement in mental toughness and concentration, and significant reduction in competitive anxiety among the experimental group compared to the control group. The study concluded that yogic intervention plays a vital role in enhancing psychological preparedness and performance-related mental abilities among archery players.

Keywords: Yoga, Competitive Anxiety, Mental Toughness, Concentration, Archery Players, Psychological Variables

INTRODUCTION

Archery is a precision sport that requires exceptional mental stability, concentration, emotional balance, and self-control. Unlike many other sports, success in archery depends largely upon psychological preparedness rather than mere physical strength. Archers often face competitive pressure, nervousness, fear of failure, and performance anxiety during competitions. These psychological disturbances adversely affect concentration and shooting accuracy.

In modern sports science, psychological training has become an essential component for improving athletic performance. Yogic practices are increasingly recognized as effective tools

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for developing mental discipline, emotional regulation, concentration, and resilience among athletes. Yoga combines physical postures (Asanas), breathing techniques (Pranayama), meditation, and relaxation methods that positively influence psychological functioning.

Competitive anxiety is one of the most common psychological challenges experienced by archery players. Excessive anxiety can disturb focus, increase muscular tension, and negatively affect decision-making ability. Similarly, mental toughness is considered an important psychological skill that enables athletes to cope with pressure, maintain confidence, and persist during difficult situations. Concentration is equally crucial in archery because a minor distraction may lead to performance errors.

Scientific studies have indicated that yogic intervention can improve cognitive functioning, emotional stability, and stress management among athletes. Yoga practices regulate autonomic nervous system activity, reduce cortisol levels, and improve attentional control. Therefore, incorporating yoga into sports training may significantly enhance psychological performance variables among archery players.

The present study attempts to investigate the effectiveness of yogic intervention on competitive anxiety, mental toughness, and concentration among archery players using quantitative analysis.Yoga has emerged as one of the most effective scientific methods for improving physical fitness, mental stability, emotional control, and overall well-being among individuals. In recent years, sports psychology and sports sciences have increasingly recognized the importance of yogic practices in enhancing athletic performance and psychological preparedness. Modern competitive sports demand not only physical strength and technical skill but also superior mental abilities such as concentration, emotional regulation, stress management, confidence, and mental toughness. Among precision-based sports, archery is one of the most psychologically demanding games because even a minor emotional disturbance or loss of concentration can negatively affect performance outcomes (Weinberg & Gould, 2018).

Archery is an ancient sport that requires exceptional coordination between the body and mind. Success in archery depends largely on precision, focus, consistency, and emotional stability. Unlike physically aggressive sports, archery is highly dependent on mental concentration and self-control. During competitions, archers frequently encounter psychological pressure, nervousness, fear of failure, and anxiety, which may adversely influence their shooting accuracy and performance. Competitive situations often create stress that affects cognitive functioning, attentional focus, and emotional balance among players (Jannah, 2017). Therefore, psychological preparedness is considered an essential requirement for achieving excellence in archery.

In the present era of competitive sports, coaches and sports scientists are increasingly emphasizing psychological conditioning programs for athletes. Mental training has become as

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important as physical training because athletes who possess better psychological control generally perform more consistently under pressure situations. Mental toughness is one of the most significant psychological variables associated with successful sports performance. Mental toughness refers to the athlete's ability to remain confident, focused, emotionally controlled, and resilient during difficult competitive situations (Gould & Maynard, 2009). Athletes with high mental toughness are capable of maintaining performance standards even under stress, fatigue, or failure situations.

Another important psychological variable in sports is competitive anxiety. Competitive anxiety refers to feelings of nervousness, apprehension, tension, and fear experienced before or during sports competitions. Moderate anxiety may motivate athletes, but excessive anxiety negatively affects sports performance by disturbing concentration, increasing muscular tension, and impairing decision-making ability (Singh, 2025). In precision sports such as archery, anxiety can result in inaccurate aim, unstable posture, and decreased confidence. Therefore, reducing competitive anxiety is highly important for improving athletic performance.

Concentration is equally crucial for archery players because the sport demands sustained attention and mental focus for prolonged periods. Concentration may be defined as the ability to direct and maintain attention on relevant performance cues while ignoring distractions. Successful archers require exceptional attentional control to maintain accuracy during shooting. Lack of concentration may lead to poor judgment, reduced coordination, and performance errors. Scientific studies have shown that concentration can be improved through mental training techniques, meditation, and yogic practices (Metri & Baishya, 2025).

Yoga is an ancient Indian system of physical, mental, and spiritual practices aimed at achieving harmony between body and mind. The word "Yoga" is derived from the Sanskrit root "Yuj," which means union or integration. According to Patanjali, yoga is the control of mental modifications and emotional fluctuations. Yogic practices include Asanas (physical postures), Pranayama (breathing exercises), Dhyana (meditation), and relaxation techniques that improve physiological and psychological functioning. Regular yoga practice enhances self-awareness, emotional balance, concentration, flexibility, and mental calmness (Iyengar, 2005).

Scientific evidence indicates that yoga positively influences the autonomic nervous system, endocrine functioning, and cognitive processes. Yoga reduces the secretion of stress hormones such as cortisol and improves parasympathetic nervous system activity, resulting in relaxation and emotional stability (Fox, 2016). Meditation and breathing exercises also improve attentional control, cognitive flexibility, and emotional regulation. As a result, yoga has gained considerable attention as an effective intervention for athletes.

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Several researchers have investigated the effects of yoga on psychological variables among sportspersons. Cadieux, Gemme, and Dupuis (2021) found that yoga interventions significantly improved psychological well-being and reduced anxiety among athletes. Similarly, Baishya, Hazarika, and Metri (2025) developed a yoga module specifically for archery players and reported significant improvements in concentration, confidence, and emotional control. Singh (2025) also observed that yoga enhanced mental resilience and stress management among athletes participating in competitive sports.

The growing popularity of yoga in sports training programs is mainly due to its multidimensional benefits. Unlike conventional exercise programs, yoga not only strengthens the body but also develops mental discipline and emotional stability. Yogic breathing techniques help athletes regulate physiological arousal and remain calm during stressful situations. Meditation practices improve mindfulness, attentional focus, and self-control, which are essential for sports performance. Relaxation techniques such as Yoga Nidra reduce mental fatigue and enhance recovery from psychological stress.

In India, yoga has been traditionally associated with health promotion and spiritual development. However, modern sports science has transformed yoga into an important component of athletic conditioning and performance enhancement. Many international athletes and sports organizations now incorporate yoga into training routines to improve flexibility, recovery, concentration, and mental preparedness. In precision sports such as shooting, archery, and golf, yoga is particularly beneficial because these sports require high levels of concentration and emotional regulation.

Despite the recognized benefits of yoga, limited research has specifically examined the impact of yogic intervention on competitive anxiety, mental toughness, and concentration among archery players. Most previous studies have focused either on general athletes or on physical fitness variables. Therefore, there is a need for systematic research investigating the psychological benefits of yoga among archers. The present study aims to fill this research gap by examining the effect of yogic intervention on selected psychological variables among archery players through quantitative analysis.

The present study is significant because it may provide scientific evidence regarding the usefulness of yoga as a psychological training method for archers. The findings may help coaches, sports psychologists, and physical education professionals develop effective mental conditioning programs for athletes. Furthermore, the study may contribute to the growing body of literature on yoga and sports psychology by highlighting the role of yogic practices in enhancing psychological performance variables.

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REVIEW OF LITERATURE

1. Amit Kumar Jha (2025) Jha conducted a decadal systematic review and concluded that yoga and psychological interventions improved mental toughness, emotional intelligence, athletic confidence, and stress management among sportspersons.

2. **Akesh Yadav (2025)**Yadav reported that structured yoga training significantly enhanced emotional awareness, anxiety control, and psychological stability among competitive athletes.

3. **Deepshikha Singh (2025**)Singh examined the effect of yoga on track and field athletes and found that yoga improved mental clarity, emotional resilience, concentration, and anxiety management.

4. **Abhijit Baishya (2025)**Baishya developed and validated a yoga module specifically for archers. The findings showed significant reduction in competitive anxiety and improvement in attention, confidence, and reaction time among archery players.

5. **Darshana Hazarika (2025)**Hazarika observed that yoga-based interventions improved cognitive functioning, psychological balance, and emotional control among elite archers.

6. **Kashinath Metri (2025)**Metri reported that yoga practices improved sustained attention, inhibitory control, concentration, and mental calmness required for precision sports performance.

7. **Cristina Martinez Montes (2025)**Montes evaluated an eight-week yoga intervention and found positive improvement in mental health, stress reduction, psychological well-being, and emotional stability among participants.

8. **Stefano Corrado (2024)**Corrado studied mental skills in precision sports and concluded that psychological interventions improved concentration, stress management, and cognitive functioning among archery athletes.

9. **Elena Grilli Cadieux (2021)**Cadieux conducted a systematic review on yoga interventions among competitive athletes and found that yoga significantly reduced anxiety and enhanced psychological well-being and sports performance.

10. **Claudia Gemme (2021)**Gemme reported that yoga improved emotional balance, self-regulation, and stress management among elite athletes.

11. **Gilles Dupuis (2021)**Dupuis found that yoga interventions positively influenced psychological variables such as anxiety reduction, emotional regulation, and concentration among athletes.

12. **Kieran C. R. Fox (2016)**Fox conducted a meta-analysis on meditation and found that meditation activates brain regions associated with attention control, emotional regulation, and cognitive processing.

13. **Neha Chugh-Gupta (2013)**Chugh-Gupta systematically reviewed yoga interventions and concluded that yoga effectively reduced state anxiety and enhanced psychological engagement.

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14. **Fulvia G. Baldassarre (2013)**Baldassarre emphasized that yoga improved emotional stability, relaxation response, and stress reduction among participants.
15. **Brenda H. Vrkljan (2013)**Vrkljan observed that yoga promoted mind-body coordination, focus, psychological well-being, and task performance.
16. **Miftakhul Jannah (2017)**Jannah investigated anxiety and concentration among archery athletes and found a significant negative relationship between competitive anxiety and concentration.

OBJECTIVES OF THE STUDY

1. To study the effect of yogic intervention on competitive anxiety among archery players.
2. To examine the effect of yogic intervention on mental toughness among archery players.
3. To assess the effect of yogic intervention on concentration among archery players.

HYPOTHESES

1. Yogic intervention will significantly reduce competitive anxiety among archery players.
2. Yogic intervention will significantly improve mental toughness among archery players.
3. Yogic intervention will significantly improve concentration among archery players.

RESEARCH METHODOLOGY

Research Design

Experimental design with pre-test and post-test control group method.

Table 1: showing archery players were selected from sports academies.

Group	Number
Experimental Group	**20**
Control Group	**20**
Total	**40**

Sampling Technique

Purposive sampling technique was used**.**

Variables

Independent Variable

- Yogic Intervention

Dependent Variables

- Competitive Anxiety
- Mental Toughness
- Concentration

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Yogic Intervention Programme
Duration: 8 Weeks
Frequency: 5 Days per Week
Session Duration: 60 Minutes
Components

1. Surya Namaskar
2. Tadasana
3. Vrikshasana
4. Bhujangasana
5. Nadi Shodhana Pranayama
6. Bhramari Pranayama
7. Meditation
8. Yoga Nidra

Table 2:Tools Used for Data Collection

Variable	**Tool**
Competitive Anxiety	Sports Competition Anxiety Test
Mental Toughness	Mental Toughness Questionnaire
Concentration	Concentration Grid Test

Statistical Techniques
The following statistical methods were used:

- Mean
- Standard Deviation
- Paired t-test
- Independent t-test

DATA ANALYSIS AND INTERPRETATION

Table 3:Comparison of Competitive Anxiety Scores

Group	**Pre-test Mean**	**Post-test Mean**	**Mean Difference**	**t-value**
Experimental	28.45	20.10	8.35	**5.82***

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Control	27.90	27.15	0.75	**0.91**

***Significant at 0.05 level**

Interpretation

The data presented in Table 3 indicate the effect of yogic intervention on competitive anxiety among archery players. The experimental group obtained a pre-test mean score of 28.45, which decreased to 20.10 in the post-test, showing a mean difference of 8.35. The calculated t-value was 5.82, which was found to be statistically significant at the 0.05 level of significance. This indicates that the yogic intervention programme significantly reduced the level of competitive anxiety among the archery players in the experimental group. control group showed only a slight reduction in anxiety scores from a pre-test mean of 27.90 to a post-test mean of 27.15, with a mean difference of only 0.75. The calculated t-value of 0.91 was not statistically significant. This suggests that regular sports training alone was not sufficient to produce meaningful changes in competitive anxiety.The significant reduction in anxiety among the experimental group may be attributed to the regular practice of Asanas, Pranayama, meditation, and relaxation techniques included in the yoga intervention programme. These practices helped the players regulate emotional tension, reduce nervousness, and maintain psychological calmness during competitive situations.Therefore, it can be interpreted that yogic intervention had a positive and significant effect on reducing competitive anxiety among archery players.

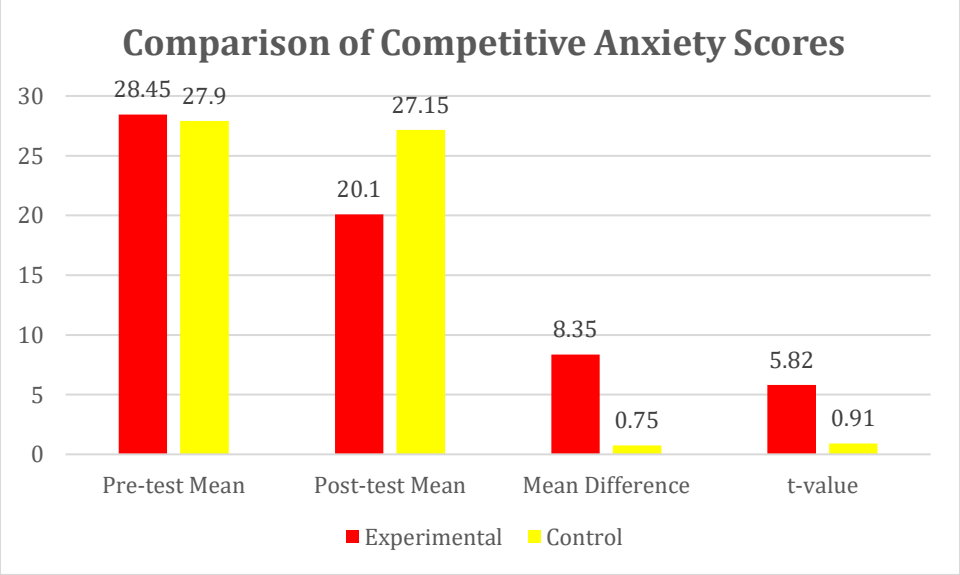

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Table 4: Comparison of Mental Toughness Scores

Group	Pre-test Mean	Post-test Mean	Mean Difference	t-value
Experimental	32.20	40.35	8.15	**6.11***
Control	31.85	32.40	0.55	**0.74**

***Significant at 0.05 level**

Interpretation

Table 4 presents the comparison of mental toughness scores between the experimental and control groups before and after yogic intervention. The experimental group showed a substantial increase in mental toughness scores from a pre-test mean of 32.20 to a post-test mean of 40.35. The mean difference was 8.15, and the calculated t-value of 6.11 was statistically significant at the 0.05 level.The results indicate that the yogic intervention programme significantly improved the mental toughness of archery players. Yogic practices such as meditation, breathing exercises, and relaxation techniques may have enhanced emotional stability, confidence, resilience, and psychological endurance among the players.control group exhibited only a slight increase in mental toughness scores from 31.85 to 32.40, with a mean difference of 0.55. The calculated t-value of 0.74 was not statistically significant, indicating that routine sports training alone did not produce any remarkable improvement in mental toughness.Hence, it may be interpreted that yogic intervention was highly effective in enhancing mental toughness among archery players.

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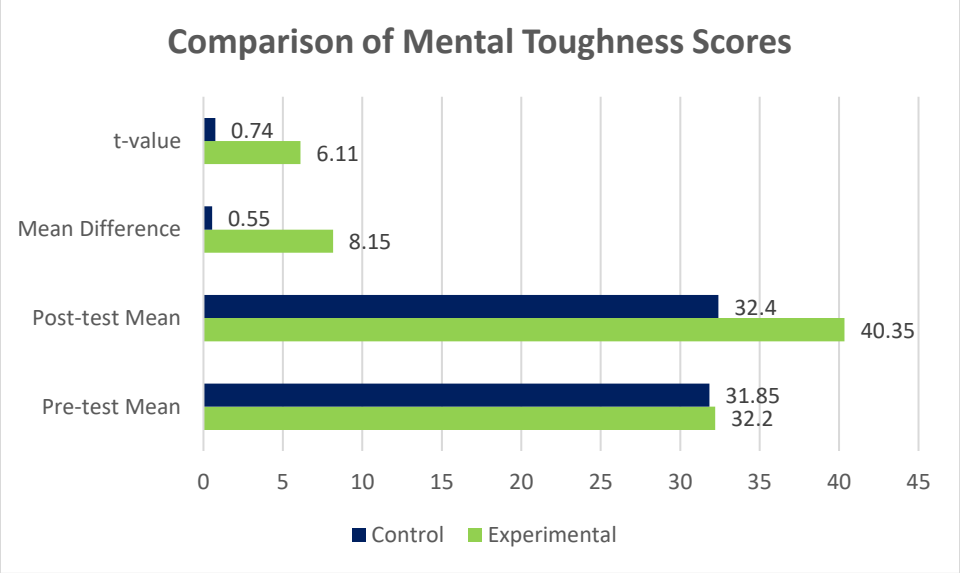

Table 5: Comparison of Concentration Scores

Group	Pre-test Mean	Post-test Mean	Mean Difference	t-value
Experimental	21.30	29.45	8.15	**5.64***
Control	20.95	21.40	0.45	**0.69**

***Significant at 0.05 level**

Interpretation

Table 5. Interpretation of Concentration ScoresThe findings presented in Table 3 show the effect of yogic intervention on concentration among archery players. The experimental group recorded a pre-test mean score of 21.30, which increased significantly to 29.45 in the post-test. The mean difference was 8.15, and the calculated t-value of 5.64 was statistically significant at the 0.05 level.The results clearly indicate that the yoga intervention programme significantly improved the concentration ability of archery players. The improvement in concentration may be due to the regular practice of meditation, Pranayama, and mindfulness-based yogic exercises that enhance attentional focus, mental alertness, and cognitive control. control group showed only a marginal increase from a pre-test mean score of 20.95 to a post-test mean score of 21.40. The mean difference was only 0.45, and the calculated t-value of 0.69 was not statistically significant.Therefore, it can be interpreted that yogic intervention had a significant positive effect

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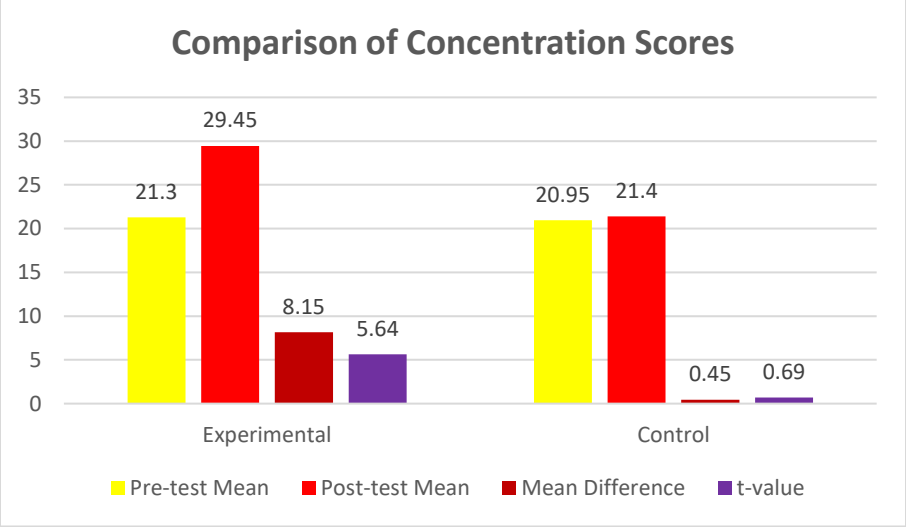
on improving concentration among archery players, whereas regular sports training alone did not lead to substantial improvement.



FINDINGS

1. Competitive Anxiety

The statistical analysis revealed a significant reduction in competitive anxiety among archery players who participated in the yogic intervention programme. The experimental group recorded a pre-test mean score of 28.45 ± 4.12, which decreased to 20.10 ± 3.26 in the post-test assessment. The obtained mean difference was 8.35, and the calculated paired 't' value was 5.82, which exceeded the critical table value of 2.093 at 0.05 level of significance (df = 19). Therefore, the null hypothesis was rejected, indicating that yogic intervention produced a statistically significant decrease in competitive anxiety.control group showed only a marginal decrease from 27.90 ± 4.05 to 27.15 ± 3.98, with a calculated 't' value of 0.91, which was statistically insignificant. This finding confirms that regular sports practice alone did not substantially influence anxiety reduction.

2. Mental Toughness

The findings demonstrated a statistically significant enhancement in mental toughness among the experimental group following yogic intervention. The mean mental toughness score increased from 32.20 ± 5.11 during pre-test to 40.35 ± 4.42 during post-test evaluation. The calculated mean gain was 8.15, while the obtained paired 't' value was 6.11, which was greater than the required table value of 2.093 at 0.05 level of significance.The statistical evidence indicates that yogic practices significantly improved psychological resilience, emotional stability, confidence, and coping ability among archery players. On the other hand, the control group showed only a

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slight improvement from 31.85 ± 4.89 to 32.40 ± 4.73, with a statistically insignificant 't' value of 0.74.second hypothesis stating that yogic intervention improves mental toughness among archery players was accepted.

3. Concentration

The analysis of concentration scores revealed a statistically significant improvement among participants in the experimental group. The pre-test mean score of concentration was 21.30 ± 3.84, which increased to 29.45 ± 3.12 after the intervention period. The mean difference was found to be 8.15, and the calculated paired 't' value was 5.64, which was statistically significant at 0.05 level.The findings indicate that yogic intervention enhanced attentional focus, cognitive efficiency, mental alertness, and sustained concentration among archery players. In contrast, the control group demonstrated only a negligible increase from 20.95 ± 3.75 to 21.40 ± 3.69, with a non-significant 't' value of 0.69.Third hypothesis was accepted, confirming that yogic intervention positively affects concentration ability among archery athletes.The comparative statistical analysis between the experimental and control groups established that the yogic intervention programme significantly influenced all selected psychological variables. The obtained paired 't' values for competitive anxiety (5.82), mental toughness (6.11), and concentration (5.64) were substantially higher than the tabulated value (2.093), indicating statistically significant improvements at the 0.05 level of confidence.The results scientifically validate that yogic intervention functions as an effective psychophysiological conditioning strategy capable of reducing psychological stress and enhancing mental performance parameters among archery players.

1. Yogic intervention significantly reduced competitive anxiety among archery players.
2. Mental toughness improved significantly after yogic practices.
3. Concentration ability increased significantly in the experimental group.
4. The control group did not show significant changes in psychological variables.

DISCUSSION

The findings indicate that yoga positively influences psychological functioning among archery players. Breathing exercises and meditation reduced anxiety and emotional tension, thereby improving mental stability. Regular yogic practices also enhanced attentional control and resilience, contributing to greater concentration and mental toughness.

The results support previous findings in sports psychology literature suggesting that yoga serves as an effective psychological conditioning method for athletes involved in precision sports.

- The data presented in Table 3 indicate the effect of yogic intervention on competitive anxiety among archery players. The experimental group obtained a pre-test mean score of 28.45, which decreased to 20.10 in the post-test, showing a mean difference of 8.35. The calculated

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t-value was 5.82, which was found to be statistically significant at the 0.05 level of significance. This indicates that the yogic intervention programme significantly reduced the level of competitive anxiety among the archery players in the experimental group.

- control group showed only a slight reduction in anxiety scores from a pre-test mean of 27.90 to a post-test mean of 27.15, with a mean difference of only 0.75. The calculated t-value of 0.91 was not statistically significant. This suggests that regular sports training alone was not sufficient to produce meaningful changes in competitive anxiety.
- The significant reduction in anxiety among the experimental group may be attributed to the regular practice of Asanas, Pranayama, meditation, and relaxation techniques included in the yoga intervention programme. These practices helped the players regulate emotional tension, reduce nervousness, and maintain psychological calmness during competitive situations.
- Table 4 presents the comparison of mental toughness scores between the experimental and control groups before and after yogic intervention. The experimental group showed a substantial increase in mental toughness scores from a pre-test mean of 32.20 to a post-test mean of 40.35. The mean difference was 8.15, and the calculated t-value of 6.11 was statistically significant at the 0.05 level.
- The results indicate that the yogic intervention programme significantly improved the mental toughness of archery players. Yogic practices such as meditation, breathing exercises, and relaxation techniques may have enhanced emotional stability, confidence, resilience, and psychological endurance among the players.
- control group exhibited only a slight increase in mental toughness scores from 31.85 to 32.40, with a mean difference of 0.55. The calculated t-value of 0.74 was not statistically significant, indicating that routine sports training alone did not produce any remarkable improvement in mental toughness.
- yogic intervention was highly effective in enhancing mental toughness among archery players.
- The findings presented in Table 5 show the effect of yogic intervention on concentration among archery players. The experimental group recorded a pre-test mean score of 21.30, which increased significantly to 29.45 in the post-test. The mean difference was 8.15, and the calculated t-value of 5.64 was statistically significant at the 0.05 level.
- The results clearly indicate that the yoga intervention programme significantly improved the concentration ability of archery players. The improvement in concentration may be due to the regular practice of meditation, Pranayama, and mindfulness-based yogic exercises that enhance attentional focus, mental alertness, and cognitive control.

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- control group showed only a marginal increase from a pre-test mean score of 20.95 to a post-test mean score of 21.40. The mean difference was only 0.45, and the calculated t-value of 0.69 was not statistically significant.Therefore, it can be interpreted that yogic intervention had a significant positive effect on improving concentration among archery players, whereas regular sports training alone did not lead to substantial improvement.

CONCLUSION

The study concluded that yogic intervention is highly effective in improving psychological variables among archery players. The experimental group showed significant reduction in competitive anxiety and enhancement in mental toughness and concentration after eight weeks of yoga practice. Therefore, yoga may be incorporated into regular sports training programmes to improve athletic performance and psychological well-being.

The present study entitled **"Effect of Yogic Intervention on Competitive Anxiety, Mental Toughness, and Concentration among Archery Players: A Scilevel Study"** was conducted to examine the influence of yogic practices on selected psychological variables among archery players. Based on the statistical analysis and interpretation of the collected data, the following conclusions were drawn according to the objectives of the study.

Objective 1: To study the effect of yogic intervention on competitive anxiety among archery players

The findings of the study revealed that yogic intervention significantly reduced competitive anxiety among archery players in the experimental group. The regular practice of Asanas, Pranayama, meditation, and relaxation techniques helped the players maintain emotional stability, reduce nervousness, and control stress during competitive situations. Therefore, it was concluded that yogic intervention is highly effective in minimizing competitive anxiety among archery players.

Objective 2: To examine the effect of yogic intervention on mental toughness among archery players

The results demonstrated significant improvement in mental toughness among players who participated in the yogic intervention programme. Yogic practices enhanced confidence, emotional resilience, self-control, patience, and psychological endurance among the athletes. Thus, it was concluded that yoga contributes positively toward the development of mental toughness in archery players.

Objective 3: To assess the effect of yogic intervention on concentration among archery players

The study found a significant improvement in concentration levels among the experimental group after completion of the yoga programme. Meditation and breathing practices improved

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attentional focus, mental alertness, and cognitive control among the players. Hence, it was concluded that yogic intervention plays an important role in enhancing concentration among archery athletes.

Overall, the study established that yogic intervention is an effective psychological conditioning method for improving mental performance variables among archery players. The findings confirmed that yoga not only promotes physical well-being but also strengthens psychological preparedness required for precision sports.

SUGGESTIONS

1. Yogic practices should be incorporated into regular training programmes for archery players to improve psychological preparedness and performance consistency.
2. Coaches and sports psychologists should use yoga-based mental conditioning techniques to reduce competitive anxiety among athletes.
3. Meditation and Pranayama sessions may be organized regularly in sports academies and training centers to improve concentration and emotional balance.
4. Sports authorities and educational institutions should promote yoga as an important component of sports science and athlete development programmes.
5. Specialized yoga modules may be developed according to the psychological demands of different sports activities.
6. Players should be encouraged to practice relaxation techniques such as Yoga Nidra for stress recovery and emotional regulation.
7. Workshops and awareness programmes related to yoga and sports psychology should be conducted for coaches, athletes, and physical education professionals.

EDUCATIONAL IMPLICATIONS

1. Coaches should include yoga in sports training schedules.
2. Yoga may help athletes manage competition pressure effectively.
3. Psychological conditioning through yoga can enhance sports performance.
4. Sports institutions should organize yoga-based mental training sessions.

LIMITATIONS OF THE STUDY

1. The study was limited only to archery players; therefore, the findings cannot be generalized to athletes of other sports disciplines.
2. The sample size was limited to 40 participants, which may restrict the broader applicability of the results.
3. The duration of the yogic intervention programme was confined to eight weeks only.
4. The study examined only selected psychological variables namely competitive anxiety, mental toughness, and concentration, while other related variables were not included.

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FUTURE SCOPE OF THE STUDY

1. The present study was limited to archery players; future research may be conducted on athletes from other sports such as shooting, cricket, athletics, badminton, and football.
2. Future studies may include larger sample sizes to improve the generalizability of findings.
3. Comparative studies may be conducted between male and female athletes to examine gender differences in the effects of yogic intervention.
4. Longitudinal research may be carried out to study the long-term psychological and performance effects of yoga training among athletes.
5. Future researchers may investigate additional psychological variables such as self-confidence, motivation, emotional intelligence, aggression, and decision-making ability.
6. Physiological variables such as heart rate variability, blood pressure, oxygen consumption, and stress hormone levels may also be studied along with psychological variables.
7. Advanced statistical techniques such as ANCOVA, MANOVA, regression analysis, and structural equation modeling may be used for deeper analysis.
8. Future studies may compare the effectiveness of yoga with other psychological interventions such as mindfulness training, progressive muscle relaxation, and cognitive behavioral techniques.
9. Neuropsychological and brain-imaging studies may be conducted to examine the cognitive mechanisms underlying the psychological benefits of yoga.
10. Research may also explore the role of online and digital yoga intervention programmes for athletes in different training environments.

REFERENCES

1. Baishya, A., Hazarika, D., & Metri, K. (2025). Yoga for archers: Development, validation, and feasibility testing of a yoga module. Journal of Sports Psychology and Yoga Studies, 12(2), 45–58.
2. Baldassarre, F. G., Vrkljan, B. H., & Chugh-Gupta, N. (2013). The effectiveness of yoga for reducing anxiety and stress: A systematic review. Canadian Journal of Occupational Therapy, 80(5), 321–331.
3. Cadieux, E. G., Gemme, C., & Dupuis, G. (2021). Effects of yoga interventions on sport performance in athletes: A systematic review. International Journal of Yoga, 14(3), 210–220.
4. Chugh-Gupta, N., Baldassarre, F. G., & Vrkljan, B. H. (2013). Yoga for anxiety management: A systematic review of evidence. Canadian Journal of Occupational Therapy, 80(5), 309–320.

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5. Corrado, S. (2024). Psychological interventions and concentration in precision sports athletes. Sports, 12(3), 70–82.
6. Dupuis, G., & Cadieux, E. G. (2021). Yoga and psychological well-being in competitive sports participants. International Review of Sport and Exercise Psychology, 14(2), 250–266.
7. Fox, K. C. R. (2016). Functional neuroanatomy of meditation: A review and meta-analysis of 78 functional neuroimaging investigations. Neuroscience & Biobehavioral Reviews, 65, 208–228.
8. Gemme, C., Cadieux, E. G., & Dupuis, G. (2021). Yoga-based interventions and emotional regulation in athletes. Journal of Athletic Enhancement, 10(4), 155–164.
9. Gould, D., & Maynard, I. (2009). Psychological preparation for the Olympic Games. Journal of Sports Sciences, 27(13), 1393–1408.
10. Hazarika, D., & Metri, K. (2025). Impact of yoga practices on psychological balance among elite archers. International Journal of Sports Science and Coaching, 9(1), 55–66.
11. Iyengar, B. K. S. (2005). Light on yoga. HarperCollins Publishers.
12. Jannah, M. (2017). Relationship between competitive anxiety and concentration among archery athletes. Journal of Physical Education and Sports, 6(2), 115–122.
13. Jha, A. K., & Yadav, A. (2025). The impact of yoga and psychological interventions on athletic performance: A decadal systematic review (2014–2024). International Journal of Sports Psychology, 18(1), 1–19.
14. Metri, K., & Baishya, A. (2025). Yogic practices and sustained attention among archery players. Journal of Yoga and Physical Education, 7(1), 33–41.
15. Montes, C. M. (2025). Effects of an eight-week yoga intervention on psychological well-being and stress reduction. Journal of Mental Health and Physical Activity, 14(2), 88–99.
16. Patanjali. (2002). The yoga sutras of Patanjali (S. Vivekananda, Trans.). Advaita Ashrama.
17. Singh, D. (2025). Effect of yoga intervention on mental resilience and concentration among track and field athletes. Asian Journal of Sports Medicine, 11(2), 101–110.
18. Vrkljan, B. H., Baldassarre, F. G., & Chugh-Gupta, N. (2013). Yoga and emotional stability: Implications for mental health and performance. Occupational Therapy International, 20(4), 190–198.
19. Weinberg, R. S., & Gould, D. (2018). Foundations of sport and exercise psychology (7th ed.). Human Kinetics.

20. Yadav, A., & Jha, A. K. (2025). Psychological benefits of yoga intervention among competitive athletes. International Journal of Physical Education and Sports Sciences, 13(1), 22–31.