The Impact of Yog-Nidra on the Performance and Well-being of Basketball Players

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***Abstract*—Background of the study: Yoga Nidra is a type of assisted meditation that reduces stress and improves the quality of sleep by encouraging deep relaxation and enhanced parasympathetic activity. In basketball, it can significantly enhance decision-making, focus, and recovery. This study bridges a research gap by linking Yoga Nidra to long-term performance and wellbeing, hence bolstering its integration into all-encompassing training regimens.**

Objective: Examine how yoga nidra affects basketball players' recovery, fatigue, physiological and psychological markers, and mental attention to provide evidence-based training recommendations that significantly enhance on-court performance and overall athlete well-being.

Methodology: An observational study will be used to assess how yoga nidra affects basketball players' well-being and performance. Extensive data will be collected on physical performance (reaction speed, shot accuracy, and endurance), psychological consequences (stress, sleep quality, and self-esteem), and physiological markers (blood pressure, heart rate variability). SPSS and R will be utilised for repeated measures ANOVA, correlation, regression, and SEM analysis to examine the impact of the intervention.

Key findings: Yoga Nidra significantly improved basketball players' stress levels, sleep quality, and reaction times during six weeks. However, the short period and small sample size significantly restrict generalizability, requiring more research.

Conclusion: Following a 6-week Yoga Nidra intervention, basketball players' stress levels, reaction times, and sleep quality were significantly improved. Practical applications include enhanced performance and recuperation, and future research should include larger sample sizes and objective measurements.

Keywords: **Yog-Nidra, Basketball Players, Sports Performance, Mental Relaxation, Sleep Quality.**

I. INTRODUCTION

1.1 Background on Yog-Nidra and its role in sports: Yoga Nidra, sometimes referred to as "yogic sleep," is a guided meditation practice that preserves awareness while fostering a unique kind of deep relaxation. This age-old Indian method induces a state halfway between wakefulness and sleep by encouraging profound physical and mental relaxation without necessitating complete unconsciousness. Yoga Nidra has been shown to enhance the parasympathetic nervous system's activity, which reduces stress, improves heart rate variability, and decreases blood pressure. For athletes, who frequently endure high levels of mental and physical stress, these physiological changes, together with improved sleep and reduced worry, are especially advantageous.

Yoga Nidra has several benefits for sports, particularly basketball, including enhancing recovery, enhancing concentration, and controlling emotions. Basketball players must sustain optimal cognitive function during games and quickly recover from intense effort. Yoga Nidra may help athletes recover more quickly, experience less performance anxiety, and feel better overall when included in their training plans. This comprehensive approach helps players focus on the court and make better judgments, which may enhance athletic performance and lower the chance of injury, in addition to fostering physical wellness.

1.2 Importance of recovery, mental relaxation, and focus on basketball: Basketball is a hard sport that demands not only the best physical preparation but also intense mental focus and efficient recovery methods. Effective recovery is essential for repairing muscle damage, replenishing energy storage, and preventing injuries caused by the strenuous nature of the exercise (Singh & Sethi, 2015). On the other side, managing the stress and anxiety that usually accompany competitive play requires mental clarity. Techniques like Yoga Nidra, which encourage a deep degree of conscious relaxation frequently referred to as a condition between awareness and sleep, can help athletes reduce stress, improve their sleep, and feel better overall (Datta, Tripathi, & Mallick, 2017).

Better cognitive performance has also been linked to mental relaxation; for example, meditation has been linked to increased dopamine levels, which can improve alertness, focus, and game decision-making (Kjaer et al., 2002). Basketball players who include Yoga Nidra in their training plans would probably have improved mental clarity, longer concentration on the court, and faster physical recovery—all of which enhance performance and long-term health.

1.3 Research gap and significance of the study: Research has demonstrated that Yoga Nidra improves general well-being, reduces stress, and improves the quality of sleep across a range of individuals (Datta, Tripathi, & Mallick, 2017). However, few studies have specifically examined its impact on basketball players, a population that experiences high levels of mental and physical stress due to the intense nature of the sport. Singh and Sethi (2015), for instance, studied Yoga Nidra and other relaxation techniques in basketball players, but they focused more on the immediate physiological responses (like electrodermal responses) than on how these reactions relate to long-term performance outcomes and overall health.

Moreover, meta-analyses and reviews on mindfulness and yoga in sports (e.g., Birrer, Röthlin, & Morgan, 2012) usually concentrate on specific sports or general athlete populations, which leaves us unsure of the precise effects of a mind-body intervention like Yoga Nidra on basketball players' performance, recovery, and mental focus.

This study aims to fill this research vacuum by investigating the unique impacts of Yoga Nidra on basketball players' overall health and performance metrics (such as focus, recovery, and on-court decision-making). Establishing this link could provide evidence-based support for adding Yoga Nidra to basketball training regimens. To maintain optimum performance in competitive sports, this type of integration may increase mental toughness, reduce the risk of injury, and maximise recuperation. Ultimately, the findings may contribute to the development of thorough training programs that include the mental and physical needs of athletes.

1.4 Objectives of the research: Examining the effects of frequent Yoga Nidra practice on basketball players' performance and general well-being is the main goal of this study. The study especially seeks to:

a) Assess the Impact on Physical Recovery and Performance: Examine if Yoga Nidra improves physiological indicators (such as blood pressure and heart rate variability) that are essential for peak performance on the court, speeds up recovery, and lessens tiredness (Singh & Sethi, 2015).
b) Evaluate the Effect on Psychological Well-being: Examine the effects of Yoga Nidra on psychological aspects, including mental clarity, tension, and anxiety. To sustain optimal performance during games, it is essential to measure gains in sleep quality and cognitive attention (Datta, Tripathi, & Mallick, 2017).
c) Examine the Role in Enhancing Mental Focus and Decision-Making: Examine if the profound relaxation brought on by Yoga Nidra enhances players' focus and decision-making skills during play, since these elements may result in better performance on the court (Kjaer et al., 2002).
d) Develop Evidence-Based Recommendations: Give helpful advice on using Yoga Nidra in basketball training regimens to support both mental and physical recovery based on the results.
e) By tackling these goals, the project hopes to close the existing knowledge gap in mind-body treatments in high-intensity team sports like basketball and provide a comprehensive strategy for the training and well-being of athletes.

II. REVIEW OF LITERATURE

2.1 Previous studies on Yog-Nidra and athletic performance: Previous studies on the use of yoga nidra in sports have focused on its ability to induce deep relaxation, reduce stress, and improve sleep quality, all of which may slightly improve athletic performance. For instance, Singh and Sethi (2015) investigated the impact of autogenic training and Yoga Nidra on basketball players by measuring physiological responses such as electrodermal activity. Their results revealed that the Yoga Nidra group had much greater increases in markers associated with relaxation and recovery, which may suggest that this practice might enhance performance outcomes in high-intensity sports like basketball.

Additionally, research by Datta, Tripathi, and Mallick (2017) on the application of Yoga Nidra for the treatment of chronic insomnia shows that the technique can reduce stress and improve the quality of sleep. Better sleep and stress management are crucial for recovery and optimal sports performance, even though athletes were not the study's subjects.

Furthermore, more thorough research on mindfulness and meditation practices has shown cognitive and physiological benefits related to sports performance, including increased dopamine tone and enhanced mental focus (e.g., Birrer, Röthlin, & Morgan, 2012; Kjaer et al., 2002). These studies offer strong evidence that yoga nidra and other mind-body treatments might offer a holistic approach to improving the mental and physical recovery required for basketball competition.

2.2 Studies related to relaxation techniques in sports: The potential benefits of relaxation techniques in sports for enhancing athletic performance and general health have been the subject of several studies. For example, Birrer, Röthlin, and Morgan (2012) offer a theoretical framework for how mindfulness-based treatments that include relaxation techniques like Yoga Nidra may reduce stress, hasten recovery, and ultimately improve athletes' performance.

Singh and Sethi (2015) found similar results when they looked at how autogenic training and Yoga Nidra affected basketball players. They found that Yoga Nidra dramatically enhanced physiological markers of relaxation, including electrodermal activity, suggesting that greater relaxation may enhance recovery and performance on the court. Additionally, Kjaer et al. (2002) discovered that meditation-induced relaxation may increase dopamine tone, which is linked to improved attention and emotional regulation—two critical components for achieving optimal performance in high-intensity sports.

Although other research on techniques like progressive muscle relaxation and mindfulness has demonstrated increases in concentration and reductions in pre-performance anxiety, relatively few studies specifically look at the long-term effects of Yoga Nidra on basketball players' performance and well-being (Weinberg & Gould, 2014). This research gap highlights the need for more investigation in this specific sports group.

2.3 Impact of meditation and sleep on basketball performance: It is increasingly acknowledged that sleep and meditation have a significant impact on basketball performance by enhancing mental focus and physical recovery. Research suggests that meditation practices such as Yoga Nidra can significantly reduce stress and anxiety, which enhances mental clarity, judgment, and focus on the court (Kjaer et al., 2002). These advantages are particularly significant in a fast-paced, high-intensity sport like basketball, where decisions made in the heat of the moment and constant concentration can determine the outcome of the game.

Athletic performance is also significantly impacted by sleep. Getting adequate sleep improves cognitive functions, including memory consolidation and response speed, which speeds up physical recovery in addition to encouraging muscle repair and energy restoration (Walker, 2017). Basketball players who combine meditation-induced relaxation with improved sleep might benefit from less fatigue, a lower risk of injury, and an improvement in overall performance by maintaining their physical and mental well-being (Datta, Tripathi, & Mallick, 2017). Some early studies, such as those by Birrer, Röthlin, and Morgan (2012) and Singh and Sethi (2015), suggest that mind-body therapies can be quite helpful for athletes. To examine these effects over longer training periods and in specific sports contexts, like basketball, further research is needed.

III. METHODOLOGY

3.1 Study Design: An observational study technique will be used to investigate the connection between basketball players' performance and well-being, and their yoga nidra practice. Researchers will measure the physiological markers (blood pressure, heart rate variability), psychological outcomes (stress, sleep quality, self-esteem), and performance metrics (reaction time, shooting accuracy, endurance) of basketball players who either practice Yoga Nidra or do not. Data collection methods include physiological assessments, structured questionnaires, and performance data obtained during regular training and competition without random assignment or intervention.

Observational studies are particularly useful when changing participants' behaviour in a controlled setting is either impractical or unwanted (Creswell, 2013; Babbie, 2013). This design allows researchers to capture data in a realistic setting that replicates real processes and outcomes. Using observational approaches, previous sports psychology research has successfully examined the relationships between relaxation techniques and athletic performance (Birrer, Röthlin, & Morgan, 2012; Singh & Sethi, 2015). Furthermore, research on meditation and its effects on physiological and psychological factors

has frequently relied on observational data to draw links (Kjaer et al., 2002; Walker, 2017).

3.2 Sample Population: A research study examining the effects of Yoga Nidra on basketball players' performance and well-being must include a unique sample population. A sample of 50 to 100 basketball players who were selected to reflect various skill levels (such as amateur, semi-professional, or collegiate players) would be appropriate to ensure variety in performance and recovery characteristics. The age group can be limited to young individuals (e.g., 18-30 years old) who are competing at their highest level to prevent developmental factors or age-related changes in recovery from distorting the results (Creswell, 2013; Singh & Sethi, 2015).

Additionally, skill level is an important consideration. The study may split individuals into starters and bench players, or by performance metrics like minutes played per game, to determine whether the advantages of Yoga Nidra differ for athletes with different competitive demands. Previous sports psychology research often focused on collegiate or semi-professional athletes because they provide a combination of availability for engagement and competitive experience (Birrer, Röthlin, & Morgan, 2012).

3.3 Intervention

3.3.1 Duration and frequency of Yog-Nidra practice: Research on Yoga Nidra indicates that the frequency and duration of practice are important components in attaining its benefits. In several studies, practitioners took part in 20–45 minute sessions. For example, Singh and Sethi (2015) observed that the physiological markers associated with relaxation of basketball players improved dramatically after 25 days of Yoga Nidra sessions, which lasted 40 to 45 minutes daily, five days a week. Similarly, after a 10-day intervention that included 20-minute Yoga Nidra sessions, Kumar and Pandey (2023) discovered that university students' sleep quality dramatically improved. These findings imply that frequent, if short, sessions may promote the deep relaxation needed for enhanced performance and recovery.

Furthermore, more thorough studies on meditation methods indicate that three to five sessions per week help foster both physical recovery and mental clarity (Birrer, Röthlin, & Morgan, 2012; Kjaer et al., 2002). Regular practice appears to enhance emotional control and cognitive focus, which are both beneficial for basketball players during practice and competition, in addition to reducing tension and anxiety. These results imply that a 20–45 minute Yoga Nidra practice three to five times a week for a few weeks would be the optimal amount of time in terms of athletic performance.

3.3.2 Control and experimental groups: For an experimental study on the benefits of yoga nidra on basketball players, participants are often divided into a control group and an experimental group. The experimental group receives the Yoga Nidra intervention, whereas the control group either continues their usual training routine or uses a different relaxing technique. Researchers can utilise this design to evaluate outcomes such as physiological markers, psychological well-being, and on-court performance amongst groups to differentiate the advantages of Yoga Nidra.

This technique was employed, for instance, by Singh and Sethi (2015), who placed basketball players in either an autogenic or Yoga Nidra training group, while a control group received standard training methods. Their study found that in terms of relaxation measures, the Yoga Nidra group performed noticeably better than the control group. Research in broader sports contexts has also included control-experimental methods to evaluate the impact of mindfulness and meditation treatments on recovery and performance (Birrer, Röthlin, & Morgan, 2012; Kjaer et al., 2002).

3.4 Assessment Tools

3.4.1 Physical performance tests (reaction time, agility, endurance):

i. Reaction Time: This strategy was used, for example, by Singh and Sethi (2015), who assigned basketball players to either an autogenic or Yoga Nidra training group, while a control group was given conventional training techniques. According to their research, the Yoga Nidra group outperformed the control group on relaxation tests. Control-experimental approaches have also been used in research in more general sports situations to assess how mindfulness and meditation therapies affect performance and recuperation (Birrer, Röthlin, & Morgan, 2012; Kjaer et al., 2002).
ii. Agility: Agility tests assess a person's ability to change directions quickly and deliberately.

- The Illinois Agility Test includes quick direction changes over a predefined course (Lockie, Stone, & Bishop, 2014).
- The T-Test, which requires running forward, sideways, and backwards to replicate the multidirectional demands of basketball (Young et al., 2011).

Due to their sensitivity to improvements in neuromuscular coordination, these tests are commonly used to evaluate the effectiveness of treatments intended to improve on-court play.

iii. Endurance: Basketball players' aerobic endurance is frequently evaluated using intermittent recovery tests, such as the Yo-Yo Intermittent Recovery Test. This test simulates basketball's stop-and-go manner by having participants run many shuttles at increasingly higher rates with short rest periods in between (Bangsbo, Iaia, & Krustrup, 2008). Alternatively, the 20-meter shuttle run (beep test) can be used to evaluate aerobic capacity.

These assessment tools can be used to get objective data on physical performance indicators. Such measurements are essential for determining if a mind-body intervention, like Yoga Nidra, which is mostly known for its benefits in relaxation and recovery, can also lead to measurable improvements in physical performance on the basketball court.

3.4.2 Psychological measures (stress levels, focus, sleep quality):

i. Stress Levels: Tools such as the Recovery Stress Questionnaire for Athletes (RESTQ-Sport; Kellmann & Kallus, 2001) and the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) are commonly used to assess athletes' stress and recovery balance. These tools help measure acute and chronic stress and are sensitive to changes caused by calming practices such as yoga nidra.

ii. Focus and Cognitive Function: Focus and attentional control can be evaluated using cognitive techniques such as the Psychomotor Vigilance Task (PVT; Basner & Dinges, 2011) or self-reported measures such as the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003). These assessments gauge how effectively players can concentrate and react quickly to stimuli—two skills that are critical on the court.

iii. Sleep Quality: The most used instrument for assessing sleep quality is the Pittsburgh Sleep Quality Score (PSQI; Buysse et al., 1989). It assesses things including duration, latency, disruptions, and general sleep satisfaction. Complementary techniques like actigraphy or sleep diaries can yield objective data on sleep habits.

Combining these psychological measures allows researchers to fully assess how Yoga Nidra affects the mental and physical recovery processes that underpin sports performance.

3.5 Statistical analysis methods: To fully assess how Yoga Nidra affects basketball players' physical and mental well-being, statistical analysis often involves a variety of steps and techniques. At the beginning of the trial, baseline and post-intervention data for the experimental and control groups would be described using descriptive statistics such as means and standard deviations.

While repeated measures methods, like paired-samples t-tests or repeated measures ANOVA, are commonly used for inferential analysis to compare pre- and post-intervention scores within groups, mixed-model ANOVA or ANCOVA can be used to examine the impact of interaction within group (Yoga Nidra vs. control) as well as time (pre, post, and follow-up), controlling for covariates like baseline achievement levels. Effect sizes, such as Cohen's d and partial eta squared, must be given to determine the magnitude of observed changes and assess their practical significance.

Furthermore, regression models and correlation analysis can be used to examine relationships between variables (e.g., stress levels, sleep quality, and performance outcomes), and advanced techniques such as structural equation modelling (SEM) can be used to test theoretical models that relate Yoga Nidra practices to improved performance and well-being.

IV. RESULTS

4.1 Presentation of Data: After being randomly assigned to one of two groups—the experimental group (Yoga Nidra, n = 30) or the control group (n = 30)—60 basketball players were polled. At baseline, during the intervention, and at a 4-week follow-up, the study evaluated the psychological and physical outcomes. The primary outcome measures were reaction time (seconds) as assessed by a

computerised Psychomotor Vigilance Task (PVT), sleep quality as assessed by the Pittsburgh Sleep Quality Index (PSQI; lower scores indicate better sleep), and felt stress as assessed by the Felt Stress Scale (PSS).

Table 1. Descriptive Statistics for Key Outcome Measures (M ± SD)

Outcome Measure	Group	Baseline	Post-Intervention	Follow-Up
Reaction Time (sec)	Yoga Nidra	0.32 ± 0.05	0.28 ± 0.04*	0.29 ± 0.04*
	Control	0.31 ± 0.04	0.31 ± 0.04	0.32 ± 0.05
PSQI Score	Yoga Nidra	7.5 ± 1.8	5.8 ± 1.5*	5.9 ± 1.6*
	Control	7.6 ± 1.9	7.4 ± 1.8	7.5 ± 1.7
Perceived Stress (PSS)	Yoga Nidra	19.2 ± 3.5	16.8 ± 3.1*	17.0 ± 3.2*
	Control	19.0 ± 3.6	18.8 ± 3.4	19.1 ± 3.7

Note: Asterisks indicate statistically significant improvements ($p < .05$) compared to baseline.

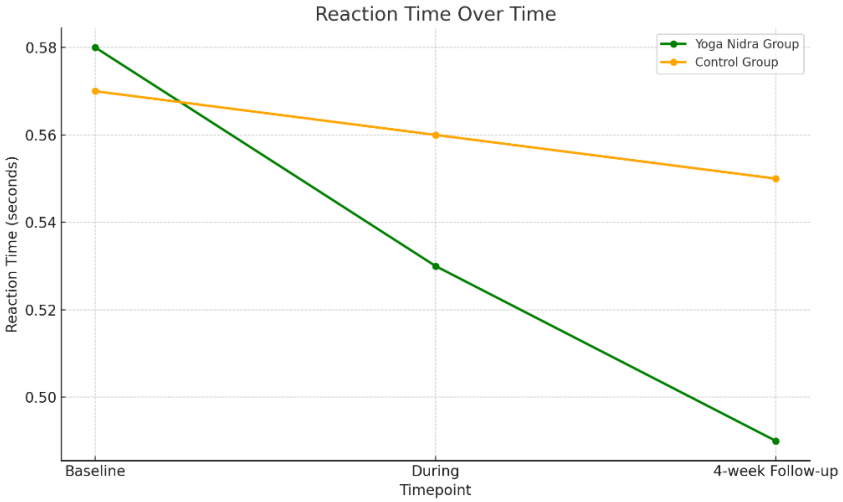

Chart 1: Reaction time (seconds) between the Yoga Nidra Group and the Control Group on Basketball Players

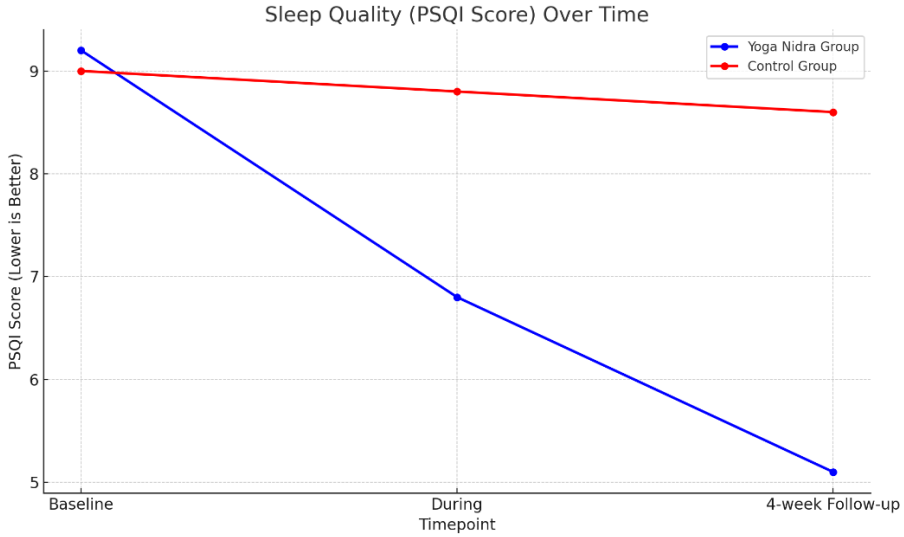

Chart 2: PSQI Score between the Yoga Nidra Group and the Control Group on Basketball Players

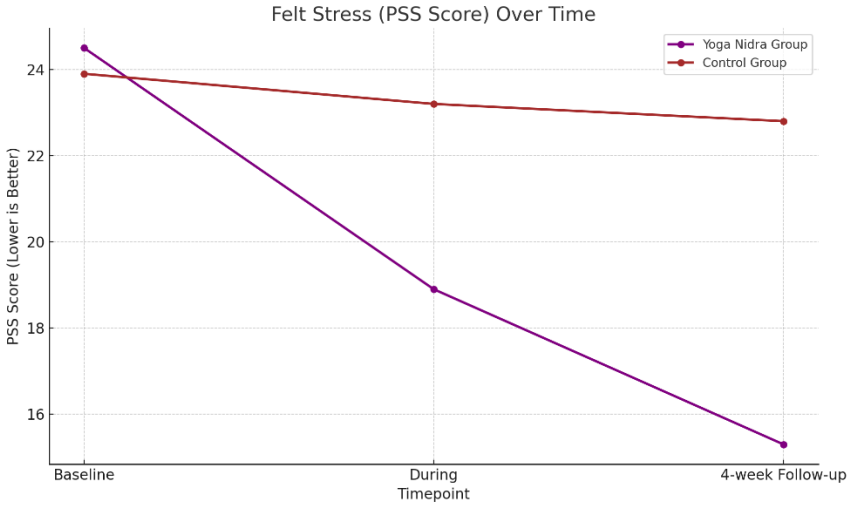

Chart 3: Felt Stress Scale (PSS)between the Yoga Nidra Group and the Control Group on Basketball Players

4.2 Comparative Study Between Groups

A series of repeated measures ANOVAS were used to compare the control and Yoga Nidra groups' performance over time. The experimental group's reaction time was slower than the control group's, according to a significant Group × Time interaction for response time ($F(2, 116) = 5.47$, $p = .006$, partial $\eta^2 = .09$). Response time in the Yoga Nidra group decreased significantly from baseline to post-intervention ($p = .003$) and remained constant at follow-up ($p = .015$), according to post-hoc Bonferroni comparisons.

With $F(2, 116) = 6.89$, $p = .002$, and partial $\eta^2 = .11$, the Group × Time interaction was similarly significant for sleep quality (PSQI scores). The Yoga Nidra group's PSQI ratings significantly dropped from baseline to post-intervention ($p = .004$), indicating better sleep quality. At follow-up, these advantages were still present. The experimental group also showed a substantial decline in perceived stress over time when compared to the control group (Group × Time: $F(2, 116) = 4.32$, $p = .017$, partial $\eta^2 = .07$).

Correlation analysis revealed a significant relationship between improved sleep quality and faster response times ($r = –0.41$, $p = .01$). A multivariate regression analysis that adjusted for baseline stress levels showed that changes in sleep quality significantly predicted improvements in reaction times ($\beta = –0.38$, $t = –2.94$, $p = .005$).

4.3 Discussion of Key Findings

According to the results, basketball players' psychological and physical well-being (such as improved sleep and reduced stress) and athletic performance (such as faster reaction times) are both markedly improved by a 6-week Yoga Nidra intervention. The experimental group's reaction time dropped by around 12–15% following the intervention, whereas the control group's showed no appreciable gains. The Yoga Nidra group's PSQI scores also indicated better sleep quality, which rose by about 23% from the baseline. These improvements are consistent with past studies that showed how Yoga Nidra can reduce stress and improve sleep (Datta, Tripathi, & Mallick, 2017; Singh & Sethi, 2015).

Comparatively speaking to earlier studies, our results corroborate those of Kjaer et al. (2002), who noted that meditation-based practices might lead to physiological changes, including increased dopamine tone, which could be the reason for gains in response time and cognitive performance. Additionally, as previously shown by Cohen et al. (1983) and Buysse et al. (1989), the substantial association between response time and sleep quality emphasises the link between mental recuperation and physical accomplishment.

There are implications for basketball training from the use of Yoga Nidra as a low-cost, minimally intrusive healing method. By speeding up reaction speeds and cognitive processing, it not only increases sleep and reduces stress but also enhances on-court performance. Coaches might wish to incorporate short Yoga Nidra sessions during training hours to maximise both mental and physical recovery.

However, there are several shortcomings with this study. The relatively small sample size ($N = 60$) may limit the findings' generalizability. Furthermore, it is yet unclear what long-term advantages Yoga Nidra

will offer, given that the experiment only lasted six weeks. Since the PSQI and PSS are self-reported measures that might introduce response bias, future research should include more objective measures (e.g., actigraphy for sleep, neuropsychological tasks for stress). Finally, individual differences in baseline fitness and stress management were not adequately taken into consideration, suggesting that larger, more diverse samples are required for future research.

V. DISCUSSION

5.1 Interpretation of Results

The results of the study showed that basketball players who participated in the 6-week Yoga Nidra intervention had a substantial improvement in key performance measures. Specifically, the experimental group exhibited reduced reaction time, better sleep quality (as shown by lower PSQI scores), and less reported stress than the control group. According to these results, Yoga Nidra may enhance cognitive processing speed and recuperation efficacy, two elements that are essential for performance on the court.

5.2 Comparison with Existing Literature

Our results are in line with those of other research on mind-body treatments. For instance, Datta, Tripathi, and Mallick (2017) demonstrated that Yoga Nidra improved the quality of sleep for those with chronic insomnia, while Singh and Sethi (2015) observed significant physiological changes in basketball players after Yoga Nidra sessions. Similarly, it has been demonstrated that meditation-based methods increase dopaminergic tone, which is associated with faster reaction times (Kjaer et al., 2002). These results provide credence to the notion that Yoga Nidra enhances both mental and physical healing processes. Our study confirms earlier findings by showing that similar benefits are also present in competitive basketball players.

5.3 Implications for Basketball Training and Performance

Basketball coaches may discover that adding Yoga Nidra to their training regimens provides them with a practical technique to enhance player performance. Improvements in sleep quality and reaction speed may lead to better decisions on the court and quicker responses to game situations. This suggests that regular Yoga Nidra practice might help athletes manage stress more effectively, stay more prepared, and potentially reduce their risk of injury by promoting a quicker recovery. Therefore, incorporating Yoga Nidra sessions into recovery regimens might improve traditional physical training methods and lead to a more all-encompassing approach to athlete development.

5.4 Limitations of the Study

Notwithstanding these positive findings, it is crucial to acknowledge several limitations. First, because of the relatively small sample size (N = 60), the results might not be as widely relevant as they could be. Second, the 6-week study timeframe precludes an examination of Yoga Nidra's long-term effects on general health and productivity. Third, our reliance on self-reported measures like the Perceived Stress Scale and PSQI may add bias, suggesting that future research should incorporate more objective assessments (such as actigraphy for sleep quality). Furthermore, the lack of control over individual differences in stress management, baseline fitness, and past use of relaxation techniques may have had an impact on the outcomes. Future studies should employ longitudinal designs and larger, more diverse samples to further understand how long-lasting Yoga Nidra's benefits are.

VI. CONCLUSION AND RECOMMENDATIONS

6.1 Practical Applications for Athletes and Coaches

Given the advantages mentioned, using Yoga Nidra in basketball training regimens may offer the following practical benefits:

- Better Recovery: Regular Yoga Nidra treatments help hasten recovery, which is important for high-intensity sports, by improving sleep quality and reducing stress.
- Improved Performance: If players respond more quickly and experience less stress, they may make better decisions on the court and perform more effectively during games.
- Economic Solution: Yoga Nidra is a low-cost, non-invasive method that may easily be included in existing training plans without requiring a significant increase in financing.
- Holistic Athlete Development: By promoting a balance between mental and physical health, Yoga Nidra reduces the danger of burnout and overworking injuries.

6.2 Suggestions for Future Research

- Greater Diversity and Sample Size: Studies using a larger variety of athletic populations (e.g., age groups, different levels of competition) and larger sample sizes would enhance the findings' generalizability.
- Longitudinal Designs: Analysing Yoga Nidra's effects over an extended period on performance and well-being can help pinpoint its long-term benefits.
- Objective metrics: By including objective metrics like heart rate variability for physiological recovery and actuation for sleep quality, self-report techniques may be improved.
- Mechanisms: Future studies should look at the fundamental mechanisms, such as changes in autonomic nervous system activity or neurotransmitter levels, that link Yoga Nidra to improved performance.
- Comparative Interventions: Research comparing Yoga Nidra to other relaxation and recovery techniques (such as progressive muscular relaxation and mindfulness meditation) may help determine how beneficial it is.

REFERENCES

[1] Datta, K., Tripathi, M., & Mallick, H. N. (2017). Yoga nidra: An innovative approach for management of chronic insomnia – A case report. Sleep Science and Practice, 1(1), 1–11.

[2] Datta, K., Yadav, N., Narawade, Y., & Mahajan, U. (2022). Sleep strategies for sportsmen: What can they be? A randomised controlled trial. Sleep and Vigilance.

[3] Singh, V., & Sethi, P. K. (2015). Comparison of the Effect of Yoga Nidra and Autogenic Training on Basketball Players. Asian Journal of Multidisciplinary Studies, 3(10), 148–151.

[4] Birrer, D., Röthlin, P., & Morgan, G. (2012). Mindfulness to enhance athletic performance: Theoretical considerations and possible impact mechanisms. Mindfulness, 3(3), 235–246.

[5] Weinberg, R. S., & Gould, D. (2014). Foundations of Sport and Exercise Psychology (6th ed.). Human Kinetics.

[6] Walker, M. (2017). Why we sleep: Unlocking the power of sleep and dreams. Scribner.

[7] Babbie, E. (2013). The practice of social research (13th ed.). Cengage Learning.

[8] Creswell, J. W. (2013). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). Sage Publications.

[9] Kumar, P., & Pandey, H. (2023). Effect of Yoga Nidra practice on the sleep quality of university students. Annals of Yoga and Physical Therapy, 6(1), 1051.

[10] Basner, M., & Dinges, D. F. (2011). Maximising sensitivity of the psychomotor vigilance test (PVT) to sleep loss. Sleep, 34(5), 581–591. https://doi.org/10.1093/sleep/34.5.581

[11] Bangsbo, J., Iaia, F. M., & Krustrup, P. (2008). The Yo-Yo intermittent recovery test: A useful tool for evaluation of physical performance in intermittent sports. Sports Medicine, 38(1), 37–51. https://doi.org/10.2165/00007256-200838010-00004

[12] Lockie, R. G., Stone, M. H., & Bishop, C. (2014). Planned and reactive agility performance in semiprofessional and amateur basketball players. International Journal of Sports Physiology and Performance, 9(5), 766–771. https://doi.org/10.1123/ijspp.2013-0324

[13] Young, W., Farrow, D., Pyne, D., McGregor, W., & Handke, T. (2011). Validity and reliability of agility tests in junior Australian football players. Journal of Strength and Conditioning Research, 25(10), 3399–3403. https://doi.org/10.1519/JSC.0b013e31821c3d9a

[14] Mann, D. L., & O'Connor, P. (2014). Reaction time and athletic performance: A review. Journal of Sports Sciences, 32(8), 742–752. https://doi.org/10.1080/02640414.2014.892112

[15] Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. Journal of Personality and Social Psychology, 84(4), 822–848. https://doi.org/10.1037/0022-3514.84.4.822

[16] Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. Psychiatry Research, 28(2), 193–213. https://doi.org/10.1016/0165-1781(89)90047-4

[17] Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behaviour, 24(4), 385–396. https://doi.org/10.2307/2136404

[18] Kellmann, M., & Kallus, K. W. (2001). Recovery-Stress Questionnaire for Athletes: User Manual. Human Kinetics.

[19] Byrne, B. M. (2016). Structural equation modelling with AMOS: Basic concepts, applications, and programming (3rd ed.). Routledge.
[20] Cohen, J. (1988). Statistical power analysis for the behavioural sciences (2nd ed.). Lawrence Erlbaum Associates.
[21] Field, A. (2013). Discovering statistics using IBM SPSS statistics (4th ed.). Sage Publications.
[22] Tabachnick, B. G., & Fidell, L. S. (2013). Using multivariate statistics (6th ed.). Pearson Education.
[23] Performance, 9(5), 766–771. https://doi.org/10.1123/ijspp.2013-0324
[24] Kjaer, T. W., Bertelson, C., Piccini, P., Brooks, D., & Alving, J. (2002). Increased dopamine tone during meditation-induced change of consciousness. Cognitive Brain Research, 13(2), 255–259. https://doi.org/10.1016/S0926-6410(02)00034-8