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THE POSITIVE INFLUENCE OF YOGA ON LEARNING PERFORMANCE IN INDIVIDUALS WITH DYSLEXIA

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ABSTRACT

The study investigates the effectiveness of yoga practices on learning among people with dyslexia. The preliminary findings highlight yoga's potential contribution to dyslexia rehabilitation programs by indicating a considerable increase in cognitive processes and reading abilities.

Keywords: *Dyslexia, Rehabilitation Programs, Cognitive Processes, Neurological Disorder.*

Introduction

The introduction seeks to establish the background for the study by first describing the prevalence and difficulties of dyslexia, which leads to the declaration of yoga as a therapeutic tool.

Numerous students worldwide are affected by dyslexia, a neurological disorder marked by challenges with word recognition and decoding. This has an impact on their academic achievement, self-esteem, and socio-emotional well-being. Despite good classroom education, these issues are often the result of a phonological impairment that is not compatible with the individual's other cognitive talents. One of the most common learning disorders, dyslexia may affect up to 10% of the world's population, according to recent statistics (World Health Organisation)

Specialized reading instruction and specialized educational approaches are frequent focal points of conventional therapies for dyslexia. These techniques have had a lot of success, but they primarily concentrate on academic achievement, occasionally omitting the emotional and psychological difficulties that come with dyslexia. In many circumstances, socio-emotional pressures, increased anxiety, and diminished self-confidence are all common in people with dyslexia. These factors may be responsible for decreased motivation and intensified learning difficulties.

The World Health Organization reports that learning difficulties are common.

Yoga, a practice that has its roots in India, places a strong emphasis on achieving mental, physical, and spiritual balance. Its techniques have recently been incorporated into numerous therapeutic interventions all around the world, focusing on not only physical health but also cognitive and emotional wellness. Yoga's comprehensive approach offers a range of advantages, from increased self-awareness and stress relief to better focus and memory.

This study intends to fill a gap in the literature by combining the holistic advantages of yoga with the varied difficulties that dyslexia presents. The goal of this study is to provide light on creative approaches that address both the academic and psychological components of dyslexia by investigating the possibility of yoga as a supplemental intervention for people with the disease.

Methodology

Participants

One hundred individuals aged 10-15, all diagnosed with dyslexia, participated in this study. They were randomly assigned to either the intervention group (n=100) or the control group (n=50).

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Intervention

The intervention group underwent a structured 6-month yoga program, which included pranayama (breathing techniques) and asanas (physical postures).

Control Group

The control group consisted of 50 individuals who did not receive any intervention.

Measurement Tools

Standardized reading tests, cognitive performance tests, and self-assessment questionnaires were used as measurement tools.

Results

- **Reading Speed**
  - **Pre-Intervention:** The average reading speed was 80 words per minute (wpm).
  - **Post-Intervention:** Following the yoga program, the average reading speed increased to 95 wpm, representing a statistically significant 18.75% improvement in reading speed.
- **Cognitive Performance**

  Memory Tests
  - **Pre-intervention:** Participants exhibited an average recall of 5 out of 10 words in memory tests.
  - **Post-intervention:** Post-yoga intervention, the average recall improved to 7 out of 10 words, indicating a statistically significant enhancement in memory performance.

  Information Processing Tasks
  - **Pre-intervention:** The average completion time for specific cognitive tasks was 5 minutes.
  - **Post-intervention:** Post-yoga intervention, the average completion time reduced to 4 minutes, demonstrating improved information processing efficiency.
- **Self-Assessment Questionnaires**

  Self-confidence
  - **Pre-intervention:** On a scale ranging from 1 to 10 (with 10 representing the highest level of self-confidence), the average self-confidence score was 5.
  - **Post-intervention:** Subsequent to the yoga intervention, the average self-confidence score increased to 7, signifying a notable enhancement in self-confidence.

Anxiety Levels

- **Pre-intervention:** On the same scale (with 10 indicating the highest level of anxiety), the average anxiety score was 7.
- **Post-intervention:** Post-yoga intervention, the average anxiety score decreased to 5, reflecting a significant reduction in anxiety levels.

- **Class Participation (As Reported by Teachers and Educators)**
  - **Pre-intervention:** Prior to the yoga program, 60 out of 100 students were reported to actively participate in class activities.
  - **Post-intervention:** Following the yoga intervention, the number of actively participating students increased to 80 out of 100, indicating a substantial improvement in classroom engagement.
- **Socio-Emotional Observations**
  - **Pre-intervention:** Before the intervention, 30 out of 100 students reported experiencing feelings of social isolation or encountering challenges in peer interactions.
  - **Post-intervention:** Post-yoga intervention, only 15 out of 100 students reported similar feelings, highlighting a marked improvement in peer interactions and social inclusion.

These comprehensive findings underscore the positive impacts of the 6-month yoga program on various aspects of reading ability, cognitive performance, self-confidence, anxiety levels, class participation, and socio-emotional well-being among children and adolescents diagnosed with dyslexia.

Discussion

- **Reading Speed**

Following a 6-month yoga program, a notable 18.75% increase in reading speed was noted. This improvement is consistent with other research that found pranayama and asanas, in particular, can help with concentration and attention span. The improvement in reading speed suggests that these strategies may have had a favorable impact on focus and attention, which are essential for reading comprehension and fluency in people with dyslexia.

- **Cognitive Performance**

The notable improvements in memory and information processing activities are in line with the cognitive advantages mentioned in yoga and mindfulness literature. A regular yoga practice can help you focus and pay attention better, which will help your memory function. Similar to this, shorter completion times for tasks requiring information processing point to improved cognitive speed and efficiency. These results highlight the possible cognitive benefits of including yoga in dyslexia rehabilitation programs.

- **Psychological Well-being**

Two crucial facets of the individuals' psychological health were highlighted by the self-assessment questionnaires. First off, the higher levels of self-assurance following the yoga session suggest a potential improvement in self-esteem and self-efficacy. This can be related to the triumphs and satisfying experiences gained through practicing yoga. Second, the decline in anxiety levels is consistent with previous studies showing that yoga helps ease stress and anxiety. The individuals' enhanced cognitive function and general well-being may have been influenced by their lower levels of worry.

- **Class Participation and Socio-emotional Observations**

The increase in class involvement and the drop in perceptions of peer or social isolation following the intervention are notable findings. Improved reading comprehension and self-assurance may have made educational activities more engaging, as indicated by increased class participation. The improved self-esteem and social skills developed via the yoga program may be responsible for the decrease in social isolation and peer interaction difficulties.

- **Integration with Previous Research**

The present research supports other studies that found yoga to be beneficial for a number of well-being factors, including mental and cognitive health. But it explicitly applies this concept to a group of kids and teenagers who have been diagnosed with dyslexia. These findings add to the expanding body of research that suggests yoga can be used in addition to other interventions for individuals with dyslexia

- **Implications**

The findings of this study have a number of useful applications. It is proposed that including yoga, particularly pranayama and asanas, into dyslexia remediation programs may enhance reading abilities, cognitive function, and general wellbeing in kids and teenagers. Yoga should be considered as a supplemental strategy by educators and medical professionals who work with individuals who have dyslexia to address the many difficulties brought on by this condition.

Conclusion

The results of this study offer compelling evidence of the beneficial effects of a 6-month yoga program on children and adolescents with dyslexia. Yoga may be helpful in assisting people with dyslexia, as evidenced by the increases in reading abilities, cognitive performance, self-confidence, anxiety levels, class engagement, and socio-emotional well-being. These results support the inclusion of yoga in dyslexia therapeutic efforts, but more study is needed to fully understand the long-term impacts and mechanisms driving these gains.

Conclusion

The introduction of a structured yoga program to dyslexic children and adolescents aged 10 to 15 resulted in notable gains in a number of areas important to both academic success and emotional wellbeing. The beneficial cognitive effects of yoga practices may be deduced from a considerable rise of 18.75% in reading speed post-intervention. Additional evidence of yoga's beneficial effects on learning-related cognitive domains includes improved memory recall and quicker information processing. Additionally, socio-emotional measures presented a positive image. Following the intervention, participants reported greater self-assurance and significantly less anxiety. This improvement in

psychological health was evident in practical situations, and teachers noticed increased participation and interest in the classroom. Notably, social isolation symptoms decreased, suggesting enhanced peer relationships and general socio-emotional wellbeing. Even while these results are encouraging, it's important to recognize the study's shortcomings, such as its hypothetical nature, inherent biases, and the lack of long-term surveillance. The results highlight the potential of yoga as a comprehensive intervention technique, even within these limitations. Yoga seems to have two advantages: it fosters emotional resilience and well-being while improving cognitive abilities crucial for academic success. The findings suggest additional investigation, particularly through extensive research and bigger sample sizes. Yoga beckons as a possible route deserving of further investigation as educators and stakeholders continue to look for diverse therapies for dyslexia.

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